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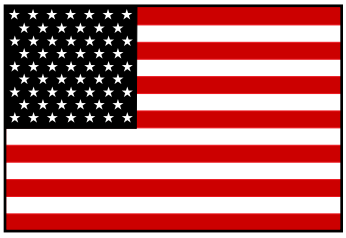
AVIATION MAINTENANCE ALERTS



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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

UNAPPROVED PARTS NOTIFICATIONS

NOTE CONCERNING UNAPPROVED PARTS NOTIFICATIONS

All of the Unapproved Parts Notifications (UPN) listed in this publication were issued by the FAA, Suspected Unapproved Parts Program Office, AVR-20, and published by the Airworthiness Programs Branch, AFS-610.

Any questions or comments concerning these UPN's should be directed to the originating FAA office listed in each UPN. A complete listing of UPN's is found on the Internet at: <http://www.faa.gov/avr/sups.htm>.

UNAPPROVED PARTS NOTIFICATION NO. 98-310
REVISED FEBRUARY 28, 2001

This revised Unapproved Parts Notification clarifies the suspect motors' serial numbers.

AFFECTED PART
Electric motor used in anti-collision and wing position lights.

PURPOSE
The purpose of this Unapproved Parts Notification is to advise all aircraft owners, operators, maintenance entities, manufacturers, suppliers, and aircraft parts distributors of the existence of electric motors, part number A8113-1, used in anti-collision and wing position lights, that are being misrepresented as having been produced by a Federal Aviation Administration (FAA) Production Approval Holder (PAH).

BACKGROUND
Grimes Aerospace (Grimes), 240 Twain Avenue, Urbana, Ohio 43078, PAH for the electric motor (part number A8113-1), reported to the FAA that they were notified of motors bearing the Grimes part number and having characteristics different from

the motors produced by Grimes. Grimes indicated that the documentation accompanying the suspect motors was not traceable to any records in the Grimes manufacturing or shipping history.

According to Grimes, the distinguishing characteristics of the motors include the following:

- The size of the bearings in the suspect motors is different from the size of bearings in a Grimes motor.

- Grimes uses an ink stamp for the identification of the part; the suspect motors have identification affixed by metal plates.

- Grimes motors are not serialized; invoice documents indicate that the suspect motors have serial numbers 235 through 384. However, the suspect motors are not limited to those known serial numbers.

- Both shaft ends on the Grimes motor are sealed; the shaft end(s) on the suspect motors is/are open. The shaft bearing is visible on the suspect motor.

- The wires protruding from the Grimes motor housing are sealed with a rubber grommet; the suspect motor's housing is sealed with silicon.

At this time, the FAA is not aware of any reported motor failures. This notification, however, is being issued because Grimes has stated the suspect motors cannot be traced to their production process; nor does any evidence exist that the suspect motors were manufactured under any FAA production approval process.

RECOMMENDATION

Regulations require that type-certificated products conform to their type design. Aircraft owners, operators, maintenance organizations, manufacturers' suppliers, and aircraft parts distributors should verify the FAA approval status of the anti-collision and wing position light motors. Motors that cannot be traced to a FAA-approved source should be considered suspect and reported to the local FAA Manufacturing Inspection District/Satellite Office (MIDO/MISO). If any of the referenced motors are installed on aircraft, appropriate action should be taken. If found in existing aircraft parts stock, it is recommended that the motors be quarantined to prevent installation until a determination can be made regarding each motor's eligibility for installation.

FURTHER INFORMATION

Further information regarding this investigation may be obtained from the FAA MIDO referenced below. The FAA would appreciate any information regarding the discovery of the above-referenced part from any source, the means used to identify the source, and the action taken to remove the part from service or stock.

This notice originated from the FAA Manufacturing Inspection District Office, One Crown Center, 1895 Phoenix Blvd., Suite 475, Atlanta, GA 30349, telephone (770) 703-6100, fax (770) 703-6108; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0580, fax (703) 661-0113.

UNAPPROVED PARTS NOTIFICATION NO. 2001-00046
MARCH 7, 2001

AFFECTED PARTS
Assorted O-rings, seals, and gaskets manufactured for military aircraft.

PURPOSE
The purpose of this notification is to advise all aircraft owners, operators, maintenance organizations, manufacturers, and parts distributors regarding the manufacture of non-conforming parts produced by L&T Seals, Inc.

BACKGROUND
Information received during a Defense Criminal Investigation Service suspected unapproved parts investigation revealed that L&T Seals, Inc. (CAGE Code 0ZF09), 319 West 17th Street, Galena, KS 66739, produced non-conforming O-rings, seals, and gaskets of various sizes and cost. These parts were represented as having been manufactured to a military specification (MIL-SPEC). Further investigation revealed that some of the parts failed during use, and when tested, were found to be manufactured using incorrect material. The MIL-SPEC required that the parts be made of nitrile; however, testing disclosed that the parts were made of neoprene. After this disclosure, L&T Seals, Inc., ceased operation.

The following O-rings have been identified by National Stock Number as not meeting the required specification:

5330002913077	**MS29513-238**
5330010142605	**NAS1611-014**
5330008078993	**MS28775-228**
5331002519378	**MS29513-346**
5330009531885	**NAS1611-018**

Although produced for military aircraft, some of the parts produced by L&T Seals, Inc., may have commercial application. At the present time, there is no indication that the referenced parts produced by L&T Seals, Inc., have been installed on civil aircraft.

RECOMMENDATION
Aircraft owners, operators, maintenance organizations, manufacturers, and parts distributors should inspect their aircraft, aircraft records, and/or parts inventories for any parts produced by L&T Seals, Inc. Appropriate action should be taken if any of these parts have been installed in an aircraft. If any existing inventory includes these parts, the Federal Aviation Administration (FAA) recommends that you quarantine the parts to prevent installation in aircraft until a determination can be made regarding each part's eligibility for installation.

FURTHER INFORMATION
Further information can be obtained from the FAA office given below. The FAA would appreciate any information concerning the discovery of the above-referenced parts from any source, the means used to identify the source, and the action taken to remove the parts from service.

This notice originated from the FAA Manufacturing Inspection Office, ACE-180, 901 Locust Street, Kansas City, MO 64106, telephone (816) 329-4180, fax (816) 294-4157; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0580, fax (703) 661-0113.

AIRPLANES

BEECH

Beech; Model V35B; Bonanza; Smoke Odor in the Cockpit; ATA 2822

Shortly after takeoff, the pilot smelled smoke in the cockpit. He returned to the departure airport and landed safely.

The technician discovered fuel leaking from the engine-driven fuel pump (P/N 638154-16) case halves. He found evidence of a “flash” fire and suspected it caused the smoke odor.

The submitter stated the fuel pump case halves were not exceptionally loose; however, a small amount of fuel did escape. It is possible the gasket shrunk enough to cause this defect.

Part time since overhaul-1,500 hours.

Beech; Model 58; Baron; Cabin Heater Defect; ATA 2140

During a flight, the pilot smelled “heater exhaust fumes” in the cockpit. He terminated the flight and made a safe landing at the airport.

The technician conducted an operational test of the cabin heater (Janitrol B4500), and found the “Cermakote” combustion can was punctured at the aft end, adjacent to the rear drain. It is possible that insufficient cool-down procedures prior to shutting down the heater could cause this type of damage.

Part total time-1,150 hours.

Beech; Model 58; Baron; Engine Fuel Supply Difficulties; ATA 7314

During a takeoff, the pilot noticed both engines displayed a drop in fuel pressure. He returned to the departure airport. After landing the fuel pressure declined further and both engines failed.

The technician discovered low unmetered fuel pressure was delivered by both engine-driven fuel pumps (P/N 646-212-19A1). This was the second similar occurrence on a like aircraft within the past 2 weeks. It seems very unusual for both engine-driven fuel pumps to fail at the same time, especially considering the low number of operating hours on the pumps.

Part total time-124 hours.

Beech; Model 76; Duchess; Engine Oil Leak; ATA 8550

While performing other maintenance, a technician noticed an oil leak.

After cleaning the area, the technician determined the oil was leaking past the engine oil filter converter plate gasket. The converter plate and gasket are the subject of Airworthiness Directive (AD) 2000-18-53. In this case, the AD does not apply due to the installation date. AD 2000-18-53 concerns oil filter converter plates (P/N LW-13904) or gaskets (P/N LW-13388) that were replaced after April 1, 1999.

The leaking gasket did not appear to be extruded from deterioration or overtorque as described in the AD. After the submitter replaced the gasket with one manufactured by Champion (P/N CH-48211), he conducted operational leak check which proved satisfactory.

Aircraft total time-1,707 hours.

Beech; Model B-90; King Air; Smoke in the Cabin; ATA 8120

The pilot aborted a flight because of smoke in the cabin. He was able to ventilate some of the smoke, and safely landed the aircraft at the departure airport.

While investigating, the technician discovered a supercharger (P/N 126106) oil seal was leaking. The oil, mixed with hot bleed air, generated the smoke that entered the cabin. This condition creates a very serious hazard to flight safety and could result in a catastrophic accident. He recommended giving the supercharger assembly close attention at every opportunity.

Part total time-1,884 hours.

Beech; Model 95-B55; Baron; Main Landing Gear Failure; ATA 3230

During a landing approach, the left main landing gear failed to extend when the pilot selected the gear to the “down” position. All efforts to extend the gear failed, and he made a safe gear-up landing.

While investigating this incident, a technician found the left main gear uplock roller bearing was seized. Airworthiness Directive (AD) 72-22-01 deals with this specific subject; however, it is not applicable to this aircraft serial number. He discovered the clearance between the uplock roller bearing (P/N NAS505-5J) and the uplock block (P/N 35-815156-4) was insufficient and not in accordance with the manufacturer’s technical data. He also found the gear uplock boot (P/N 35-815156-4) was torn. When he retracted the gear, it wedged between the wing skin and the uplock assembly.

The submitter suggested strict adherence to the manufacturer’s technical data specifications during inspections and maintenance. The inspections should also include proper lubrication and inspection of the gear uplock assembly.

Part total time not reported.

Beech; Model 100; King Air; Landing Gear Failure; ATA 3230

During a landing approach, the pilot could not extend the left main landing gear. All attempts to lower the gear failed, and he landed the aircraft with the gear retracted.

While investigating, a technician found the left main gear torque shaft was broken. The shaft was sheared inboard of the gear actuator attachment point. He speculated this damage was caused by internal failure of the actuator. He did not disassemble the actuator and did not determine a cause for this failure.

Part time since overhaul-2,744 hours.

Beech; Model 100; King Air; Wing Flap Defect; ATA 2750

While conducting a scheduled inspection, the inspector discovered a support for the inboard flap track of the outboard flap segment was broken.

The broken support (P/N 35-115236) allowed the full burden of the flap to be borne by the rear wing spar web. Due to in-flight airloads, the flap track began to pull aft which caused the spar web to crack. Also, the rib angle just forward of the flap track was cracked.

The submitter contacted the manufacturer for proper repair procedures; but at the time of this report, negotiations were still underway.

Part total time-6,370 hours.

Beech; Model; 200; King Air; Landing Gear Failure; ATA 3230

The pilot reported the left main landing gear green light did not illuminate when he attempted to lower the gear. Further attempts failed to produce the proper indication, and the left main gear collapsed on landing.

During an investigation, a technician found the insert, threaded into the left main gear actuator (P/N 99-810057-651) rod, had separated. A new actuator rod nut (P/N 115-810029-17) was installed a short time before this occurrence.

The submitter believes this problem resulted from a manufacturing defect on the threaded insert installed in the actuator rod.

Part total time was not reported.

Beech; Model 200; King Air; Landing Gear Retraction Difficulty; ATA 3230

After takeoff, the flightcrew retracted the landing gear and noticed a momentary pause approximately half way through the retraction cycle. After the gear completed the retraction cycle, the red light in the gear handle remained illuminated. The pilot lowered the gear, returned to the departure airport, and made a safe landing.

Maintenance personnel placed the aircraft on jacks and cycled the landing gear 24 times without duplicating the discrepancy. No problem could be found with the system. As a precaution, they changed the landing gear motor (P/N 115-380002-5) and found the gear cycle speed increased slightly. The gear motor they removed was an overhauled unit, and they were skeptical of its ability to operate properly in a flight environment with airloads applied.

Part time since overhaul was 260 hours and 305 cycles.

CESSNA

Cessna; Model 172B; Skyhawk; Flexible Hose Deterioration; ATA 7931

During an annual inspection, the technician discovered the oil pressure hose was wet with oil.

The technician removed the oil hose and discovered the hose cracked and broke when he twisted it slightly. This finding led him to check the remaining flexible plumbing. He found the engine fuel supply hose in the same condition. This aircraft was manufactured in 1956, and the maintenance records did not indicate these hoses had ever been changed.

The importance of complying with life limits on flexible plumbing cannot be stressed enough. If, as in this case, the beginning of the life limit cannot be established, the hoses should be considered unairworthy and changed. Also, a proper maintenance record entry will help the next technician and the aircraft owner.

Part total time is unknown.

Cessna; Single Engine Models 172R, 172S, 182S, 206H, and T206H, Engine Operating Anomalies; ATA 7322

The following article was submitted by the FAA Aircraft Certification Office (ACE-116W) located in Wichita, Kansas. *(This article is published without editorial changes.)*

> Recently, a Cessna 172R made an off-airport landing, as a result of not being able to initiate an in-flight engine restart following an engine failure during a power-off stall demonstration.
>
> Other model 172R and 172S aircraft were examined and found to exhibit engine idle speed and fuel flow settings that were as much out of adjustment or worse than the one involved in the off-airport landing.
>
> Reports concerning 182S and T206H models indicate this problem may involve all Cessna aircraft that have been manufactured since the resumption of production of the models identified above.
>
> Cessna has information in the applicable maintenance manuals that adequately describes the procedures to check and set the engine idle, fuel flow, and speed settings on these aircraft. Also, Cessna may soon revise the “ground idle test” and the in-flight engine restart procedures applicable to these aircraft. Cessna may also

issue additional service and operational information to help identify, what appears to be a significant shift in the idle fuel flow. The fuel servos used on these aircraft are suspect for the problems identified here and historically require seasonal or periodic minor adjustments to the idle fuel flow and speed settings. However, the shift in engine idle fuel flow and idle speed currently being reported are considerably beyond the seasonal/periodic adjustments normally required.

It is not presently known how often the engine idle fuel flow and speed setting might "drift" from those known to have been properly set when these aircraft were delivered by the manufacturer.

It is recommended that all operators of these aircraft ensure that adequate procedures are used to maintain them in an airworthy manner.

Cessna; Model 172S; Skyhawk; Wheel Brake Failure; ATA 3242

The pilot reported the right wheel brake became inoperative during the last landing.

While investigating, a technician discovered brake fluid leaking onto the cockpit floor. He also found the brake hose (P/N S1167-3-0085), which runs from the right brake cylinder to the bulkhead under the rudder pedals, had a loose "B-nut."

Given the short amount of operating time, the submitter speculated the "B-nut" was not properly torqued during factory assembly.

Aircraft total time-414 hours.

Cessna; Model R182; Skylane; Improper Seat Rail Attachment; ATA 5347

While complying with the requirement of Airworthiness Directive (AD) 87-02-03, the technician discovered the seat tracks were improperly attached.

The seat tracks were installed with "Cherry Max" blind fasteners and oversized standard rivets. The "Cherry Max" blind fasteners are not approved for major structural installations. The oversized standard rivets reduced the required fastener hole edge distance to less than the required two-times the fastener diameter. To restore the aircraft to an airworthy condition, it was necessary for the technician to remove and replace the seat tracks.

The submitter suggested checking for proper seat-track fastener installation while complying with AD 87-02-03.

Part total time-4,169 hours.

Cessna; Model T210N; Centurion; Nose Landing Gear Door Damage; ATA 5280

After takeoff, the pilot retracted the landing gear and heard a "crunching" sound. The sound seemed to come from the nose gear. The pilot extended the gear, returned to the airport, and landed safely.

A technician found the nose gear actuating rod rod-end (P/N S232113) bearing was separated from the rod-end housing. This allowed the airload to close the right nose gear door prior to gear retraction. The resulting damage required replacement of the door and actuator rod-end. The damage could have been more severe had the nose gear jammed on the closed door. A rigorous inspection may have revealed this defect before the flight.

Part total time-3,230 hours.

Cessna; Model 340A; Landing Gear Defect; ATA 3230

When the pilot extended the landing gear during an approach, he heard some abnormal sounds.

The pilot summoned a maintenance technician and admitted the airspeed may have been a “bit” high when he extended the gear. The technician found the right main gear bellcrank (P/N 0841106-6) had broken causing the inboard gear door to hang open at the end of the extension cycle.

Strict adherence to published gear extension airspeed should prevent recurrence of this type defect.

Part total time-5,274 hours.

Cessna; Model 402B; Businessliner; Vertical Stabilizer Structural Defect; ATA 5531

While conducting an annual inspection, the technician discovered severe corrosion on the vertical stabilizer spar.

Exfoliation of the metal spar surface was obvious to the technician. Investigating further, he found the corrosion had penetrated approximately 25 percent of the spar thickness. This damage required replacement of the spar.

The submitter stated this aircraft was used for a long period of time in a “salt air environment.” He recommended that the vertical stabilizer receive periodic inspections at 1,000-hour intervals. He also stated the inspection and findings should be documented in the aircraft records.

Part total time-9,676 hours.

Cessna; Model 421C; Golden Eagle; Engine Oil Leak; ATA 8120

The pilot reported that during flight, he observed oil and smoke coming from the left engine. He shut down the engine and made a safe single-engine landing.

During an inspection, the technician found oil leaking from the waste gate actuator (P/N 481064-9001) area. After cleaning the area, he discovered the actuator oil inlet fitting was loose. While removing the fitting, he discovered the female threads in the actuator housing were stripped.

It did not appear the fitting had been cross-threaded, and the submitter could not determine another cause for this defect.

Part total time-1,073 hours.

Cessna; Model 550; Citation; Defective Battery Support; ATA 2432

During a scheduled inspection, the technician discovered the right battery support was cracked.

The battery support bracket (P/N 14550785-28) was cracked approximately 75 percent through the support channel. This bracket supports half the weight of the aircraft battery and was in imminent danger of complete failure. This failure could have caused a catastrophic accident.

The submitter suggested giving the battery support structure close scrutiny during inspections and maintenance.

Part total time-5,215 hours.

Cessna; Model 650; Citation; Hydraulic System Defect; ATA 3233

This article appeared originally in the February edition of this publication and contained information that was in error. The following article has been corrected, and we offer our thanks to the submitter for pointing out the mistake.

After a flight, the crew noticed copious amounts of hydraulic fluid on the right main landing gear door and the inboard right wing.

During an investigation, the technician found the right landing gear actuator (P/N 9914170-2) was broken at the wing attachment fitting, and the inboard (retraction) hydraulic fitting was bent. The evidence indicated the actuator housing bearing end had elongated prior to breaking. The submitter believes this failure was caused by metal fatigue, and it is worthy to note that the rod-end bearing was also worn and may have contributed to or accelerated this failure. The aircraft maintenance records revealed the actuator had accumulated 1,369-cycles, which is far less than the 12,000-cycle replacement life.

The submitter suggested that more frequent and diligent inspections might prevent this type of damage. The location of the affected areas of the actuator requires it be removed for a proper inspection.

Part total time-1,642 hours.

HOWARD

Howard; Model DGA-15-P; Jobmaster; Wing Strut Corrosion; ATA 5720

The stainless steel “cuffs,” installed on the right wing strut, provide protection for the strut while opening and closing the cabin door. The cuffs are not bonded to the wing strut but are wrapped around the strut and crimped in place.

During an inspection, the technician removed the strut cuffs and discovered severe corrosion damage to the strut. The area of the struts under the cuffs was pitted, and the metal was exfoliating. The cuffs were not sealed during the previous installation, and the submitter suspects this damage was caused by moisture being trapped between the cuffs and the wing struts. It is not possible to detect this damage without removing the strut cuffs.

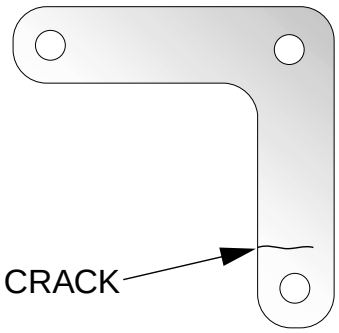
The submitter recommended that operators of like aircraft conduct a one-time inspection of this area by removing the cuffs. In this case, the damage required replacement of the wing struts.

Part total time-1,500 hours.

PIPER

Piper; PA 18-150; Super Cub; Defective Wing Flap Bellcranks; ATA 2750

With the aircraft covering removed for replacement, the technician found both wing flap bellcranks cracked.



The submitter stated the only way to properly inspect the flap bellcranks (P/N's 40092-09 and –10) is with a flashlight and mirror or removal of the fabric covering. Both of the bellcranks were cracked in the same location and were in danger of complete failure. (Refer to the illustration.) The submitter recommended inspecting all like aircraft for similar defects as soon as possible.

Part total time-more than 8,000 hours.

Piper; Model PA 23-160; Apache; Engine Oil Leak; ATA 8550

After takeoff, the pilot noticed a severe oil leak coming from the left engine cowling. He returned to the departure airport and landed safely.

The technician conducted an inspection and found the oil quantity was down by approximately 4 quarts. He determined the oil leak was caused by separation of the oil system dipstick tube. When the dipstick tube was last installed, it was improperly safety wired. Vibrations caused the dipstick tube to back out and separate. He also checked the right engine and found the dipstick tube was also improperly safety wired and leaking.

The technician properly secured, installed, and safety wired both dipstick tubes, replenished the oil supply, and performed an engine operational test. During the test, there was no oil leakage.

Part total time not reported.

Piper; Model PA 23-250; Aztec; Main Landing Gear Failure; ATA 3213

The pilot reported that after a landing touchdown he lost directional control, and the aircraft departed the right side of the runway. The aircraft was not seriously damaged, and there were no personal injuries.

While recovering the aircraft, a technician discovered the right main landing gear torque link center bolt (P/N AN174-13) was missing. It was evident the bolt broke, and the two halves separated from the torque link. The unsecured torque link allowed the lower strut and wheel assembly to swivel and turn approximately 90 degrees to the direction of aircraft travel which caused the aircraft to depart the runway.

The submitter recommended the torque link bolts be removed and replaced at 500-hour intervals.

Part total time-3,100 hours.

Piper; Model PA 28-161; Warrior; Engine Induction System Defect; ATA 7160

During an annual inspection, the technician found the carburetor induction system air valve did not operate.

The air valve assembly (P/N 87327-002) actuating lever was broken at a weld attachment. The submitter stated he has found a total of three similar failures with operating times as shown below.

The original part was made from steel, and the replacement levers are made of aluminum. The submitter speculated the aluminum part might not be structurally strong enough to bear the imposed operational loads. Also, the welding process may substantially change the heat treatment properties of the aluminum. It was suggested the manufacturer consider reverting to the original steel lever.

Part total times- 327, 623, and 186 hours.

Piper; Model PA 31-310; Navajo; Elevator Trim Defect; ATA 2731

The pilot reported that after takeoff, the aircraft began to pitch up. He returned to the departure airport and made a safe landing.

A technician investigated this anomaly and discovered the autopilot switch (P/N 761-039), on the pilot's control yoke, had an electrical short. Two of the switch terminals were in contact sending electrical power to the "elevator up" trim tab position. He repositioned the switch terminals and provided adequate insulation to prevent recurrence of this defect.

Part total time-7,313 hours.

Piper; Model PA 31-350; Chieftain; Ruff Engine Operation; ATA 7414

The owner delivered the aircraft to a repair shop with a report that the engine performance was "rough."

A technician discovered one of the Bendix magnetos was operating intermittently. He opened the magneto and discovered the capacitor (P/N 10-382681) was "coming apart." The "swaged on" top section was loose and in imminent danger of separation.

Bendix Service Bulletin (SB) CSB662A addressed this problem; however, SB CSB662A only covers capacitors with date codes up to "9942." The capacitor in this case has a date code of "9948;" therefore, SB CSB662A is not applicable.

The submitter suggested the manufacturer consider further research concerning "date code" applicability.

Part total time-219 hours.

Piper; Model PA 31-350; Chieftain; Cabin Heater Failure; ATA 2140

After a flight, the pilot reported the front cabin heater was inoperative.

A technician discovered a "hot spot" penetrated the heater (Electrosystems P/N FR65D79-3EL) combustion can. The damage was located in the rear of the combustion can adjacent to the exhaust port.

The submitter suspects the damage was caused by insufficient "cool down" procedures prior to shutting down the unit.

Part total time-2,805 hours.

Piper; Model PA 32-301T; Turbo Saratoga; Abnormally Low Engine Power; ATA 8120

After returning from a flight, the pilot stated the engine would not develop normal power while flying at cruise altitude.

A technician inspected the engine and systems and discovered the turbocharger waste gate butterfly valve was missing approximately 40 percent of the valve plate surface. (Refer to the illustration.) Since the turbocharger turbine was not damaged, he suspected the waste gate valve plate eroded slowly from exposure to exhaust gas and heat.

The engine had accumulated approximately 730 hours of operation since a factory overhaul. However, there was no indication or record the turbocharger was changed or repaired since it was installed. The submitter recommended frequent and periodic inspections of the turbocharger unit at least annually.

Part total time unknown.

Piper; Model PA 34-220T; Seneca; Landing Gear Control Failure; ATA 3230

During a landing approach, the pilot selected the landing gear to the "down" position, and the switch handle separated from the switch. The landing gear completed the extension cycle, and he made a normal landing.

A technician discovered the shaft was bent prior to the failure. He speculated someone's foot struck the switch handle during entering or exiting the cockpit. He stated this was the third similar incident he has seen. (For additional information on landing gear control damage see the "Twin Commander" article.)

Part total time not reported.

Piper; Model PA 46-350P; Malibu; Defective Nose Landing Gear Attachment; ATA 3221

While towing the aircraft, a technician noticed the nose landing gear moving from side to side.

The technician conducted an investigation and discovered the nose landing gear actuator attachment boss was not properly attached (welded) to the engine mount (P/N 89137-041). The boss was welded approximately half way around the diameter and was in imminent danger of failure. This aircraft was manufactured in 1998, and the maintenance records did not indicate any repair or other work in the area of this discrepancy.

It would be wise for owners of like aircraft to inspect the actuator boss attachment as soon as possible.

Part total time-388 hours.

SAAB

Saab; Model 340A; Commuter; Nose Wheel Well Damage; ATA 5343

While conducting a scheduled inspection, the technician discovered structural damage in the nose wheel well.

He found the left and right webs (P/N 7253620-713 and –714) were buckled adjacent to the nose landing gear trunnion attachment fittings. While reviewing the aircraft maintenance records, he found only one entry that may have been responsible for the nose wheel well damage. This incident occurred approximately 10 years earlier. He suspects that at the time of the incident, the web damage was not noticeable; however, with many hours of aircraft use during the 10-year period, the damage became more severe and noticeable.

Hidden damage inspections must be thorough, searching, and methodical to detect the type of damage found in this case.

Part total time-25,084 hours.

TWIN COMMANDER

Twin Commander; Model 690A; Landing Gear Operation; ATA 3230

The pilot reported that during a landing approach, there was no response when he selected the landing gear to the “down” position. He lowered the gear using the emergency extension system and made a normal landing.

A technician found a roll pin, in the landing gear control handle linkage, was broken. The roll pin was safety wired in position; however, the safety wire did not last very long after the pin failed. With the roll pin broken, the shaft turned inside the hole of the gear handle, which was severely worn. (Refer to the illustration.)

Several factors could have caused this failure either alone or in combination. The aircraft was manufactured in 1975, and the roll pin and control handle linkage were probably original. It is possible, although unlikely, that the roll pin was defective. Also, in selecting either the “up” or “down” position with the control handle, pilots sometimes use an exceptional amount of “gusto” to move the control.

Violent movement of any aircraft control is not a good thing. Pilots, as well as maintenance personnel, should use only enough force to reposition the control. Usually, when it is necessary to reposition the landing gear, the cockpit workload is at its peak. Exuberant movement of the gear control handle may occur without realizing the force applied. So that bad habits are not developed, flight instructors are encouraged to teach “gentle but positive” movement of the gear control.

Both pilots and maintenance personnel should be alert for any sign of looseness or “free play” in the gear control handle and take appropriate action.

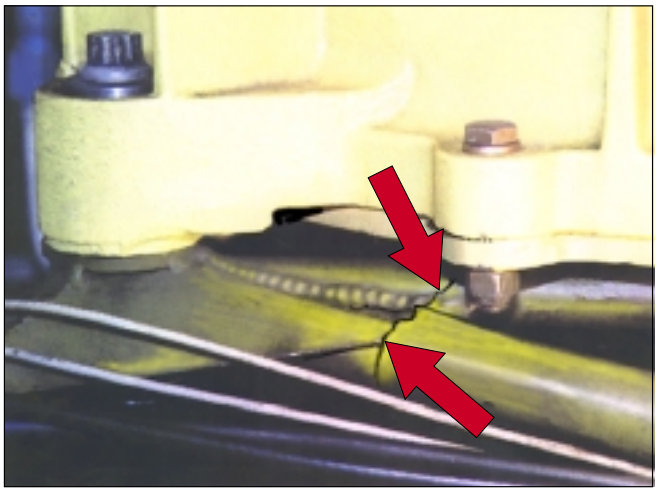
Aircraft total time-more than 6,000 hours.

HELICOPTERS

ENSTROM

Enstrom; Model 280F; Shark; Structural Crack; ATA 5311

While conducting a scheduled inspection, the technician discovered a structural tube was cracked.



The 4130 steel tube was cracked between the left forward and left rear transmission mounts. The crack traveled across the tube, a weld, and into another tube. (Refer to the illustration.) The submitter believes this damage was caused by the accumulation of repetitive applications of stress leading to metal fatigue over the helicopter's 20 years of service.

The technician found another possible contributing factor while researching the maintenance records. An entry made several years ago documented a "hard landing" when the helicopter had approximately 1,000 hours of operation. Given the amount of vibration in this area, it seems unlikely the helicopter would operate 4,500 hours before this damage was found.

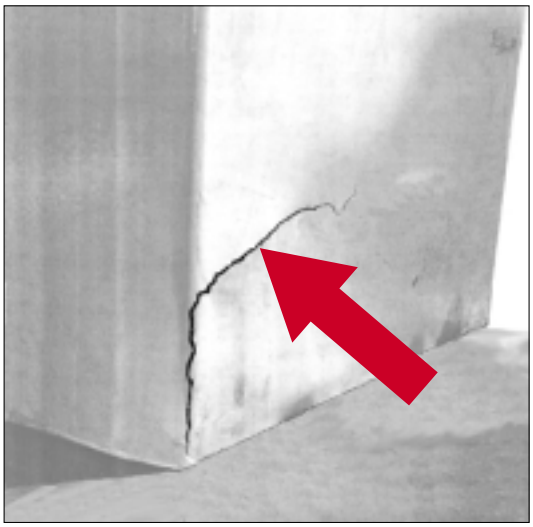
Part total time-5,503 hours.

EUROCOPTER

Eurocopter; Model AS-350B2; Ecureuil; Battery Case Crack; ATA 2400

During a 100-hour inspection, the technician discovered a crack in the battery case.

The lead-acid battery was installed in the tail boom at Fuselage Station (FS) 119.48 in accordance with Supplemental Type Certificate (STC) number SH5117NM. The crack in the battery case was approximately 1 inch long, ran vertically, and was located in the left forward lower corner of the case. (Refer to the illustration.)



The lead-acid battery, which weighed 41 pounds, was a replacement for the nickle-cadmium battery, which weighed 38 pounds. The submitter believes the increased battery weight and location subjected the battery to more severe vibrations and contributed to the premature crack in the battery case. The conversion from a nickle-cadmium to lead-acid was authorized by STC number SR09185RC, and both STCs were authorized for installation on this helicopter by an FAA Field Approval.

The submitter found the same battery configuration on another helicopter, and the battery case was cracked in a similar manner.

Part total time-441 hours.

McDONNELL DOUGLAS

McDonnell Douglas; Model 500N; Transmission Oil Contamination; ATA 6320

The technician submitted six reports concerning main rotor transmission oil contamination. He maintains a fleet of these helicopters and believes the oil contamination could affect safety.

In the technician's reports, he stated the "paint sealant," inside the main rotor-mast tube blisters and falls into the main rotor-transmission gearbox. The main rotor gearbox oil (Mobil SHC-626) does not appear to be compatible with the "paint sealant." He advised the helicopter manufacturer of his findings and is presently investigating possible solutions.

The submitter also reported finding compatibility problems between the oil seals in both the main rotor gearbox and the fan gearbox and the recommended oil. He suggested the manufacturer consider allowing the use of different oil (MIL-L-7808 or MIL-PFR-23699) for seal compatibility.

Helicopter total time-9,553 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

HOME BUILT

Home Built; Model F2 Special; Main Landing Gear Failure; ATA 3213

This is a true “home built” aircraft and uses a Teledyne Continental, Model W670 engine.

The pilot reported that while landing on a grass field, the left main wheel assembly separated from the aircraft, the gear strut dug into the ground, and caused the aircraft to flip over on its back.

An FAA Airworthiness Inspector investigated this accident. He discovered the wheel assembly separated due to a defective weld that attaches the axle to the strut bracket. Builders of “home built” aircraft are encouraged to seek “professional” help for areas of construction that are beyond their capabilities.

Part total time-47 hours.

VANS

Vans; Model RV-6; Wing Flap Failure; ATA 2750

The pilot reported that during a landing approach, the wing flaps retracted without command. After landing safely, the pilot and a technician discovered the flap actuator rod was broken.

The flap actuator rod separated just below the upper ball joint and the airload caused the flaps to retract. The actuator rod is constructed of aluminum tubing (5/16 by .058 inch 6061 T6), and the threads are cut in the ends to allow attachment.

The submitter believes the threaded areas weaken the tube (P/N F-659) and, in this case, caused the failure.

Part total time-117 hours.

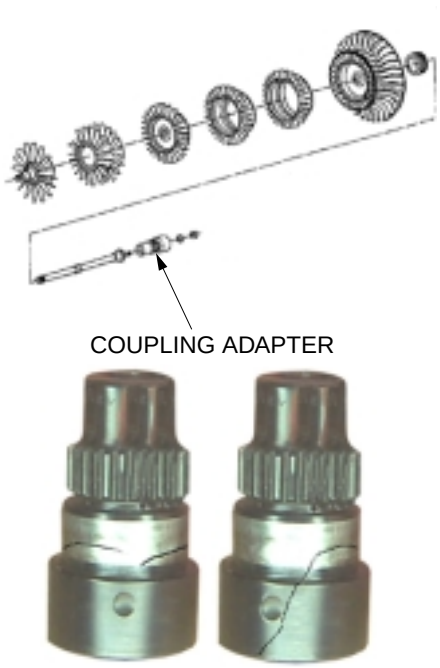
POWERPLANTS AND PROPELLERS

ALLISON

Allison; Model 250-C20; Broken Adapter; ATA 7230

This engine was installed in a Eurocopter, Model AS-355, helicopter.

The technician removed the engine to repair gearbox oil leaks. Prior to reassembly, he inspected the compressor assembly and discovered a crack in the adapter coupling (Extex P/N E23039791-1). A closer examination revealed the adapter was cracked approximately 340 degrees around its circumference. (Refer to the illustration.)



The Extex part is a Parts Manufacturing Authority (PMA) replacement part for the original adapter coupling (P/N 6871472 or 6898561). Extex issued Service Bulletin (SB) T-061, dated 03/02/2001, which lists the affected part serial numbers. The heat treatment of the adapter couplings affected by SB T-061 is suspected to be incorrect and may result in failure of these parts. Complete failure of this part was imminent.

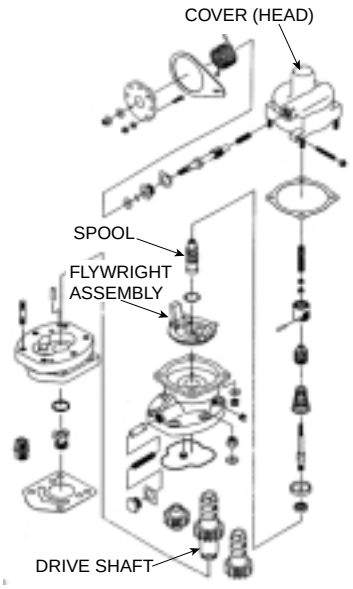
Part total time-555 hours.

HARTZELL PROPELLER GOVERNOR FAILURE

A Hartzell propeller governor (Model F6-24L) was installed on the right engine of a Piper Model PA 31-350 aircraft.

The pilot reported the right engine lost power during flight and was secured. He was able to make a safe single-engine landing and reported this incident to maintenance personnel.

After removing the propeller governor, the technician discovered the drive shaft was seized and the control lever was binding. He shipped the governor to an FAA-certified repair station for overhaul.



Repair station personnel disassembled the propeller governor and discovered that both the drive gear (P/N C-4191) and the spool (P/N B-3166) were broken. Also, there were several “impact” marks on the flyweight assembly (P/N B-4183-2) and the cover (P/N C-3174-1). (Refer to the illustrations.)

At the time of this report, the submitter had not determined a cause for these defects or details concerning the previous overhaul.

Approximate operating time since overhaul was 400 hours.

PRATT & WHITNEY

Pratt & Whitney; Model R-1340-AN; Poor Engine Operation; ATA 8530

Following an engine failure incident, the technician conducted an engine operational test. He discovered the engine began missing, ran poorly, and would not hold over 600 RPM.

The technician removed all the “rocker box” covers and discovered the number 3 cylinder exhaust rocker “play” varied from .010 inch to .125 inch. He also heard a “rattle.” He removed the exhaust push rod assembly (P/N 11876) and discovered the top end of the push rod was broken at the junction of the tube and the ball end. Considering the number of operating hours, this seems to be a premature failure.

The submitter stated it would be wise to inspect the push rod end fittings for security during scheduled inspections.

Part time since overhaul-182 hours.

TEXTRON LYCOMING

Textron Lycoming; Model TIO-540-J2B; Camshaft Wear; ATA 8520

One submitter forwarded 19 similar reports concerning unusual camshaft wear. All the affected engines were installed on Piper Model PA 31-350 aircraft, and the 19 failures occurred over a 3-year period.

While completing a scheduled inspection, the technician found metal contamination in the engine oil filter. He conducted a valve lift check and discovered the numbers 1 and 2 intake push rods were insufficient. After removing one of the cylinders, he found the corresponding lobes of the camshaft were worn excessively. Also, the "tappet" followers exhibited wear and damage.

The failures occurred on 5 of the 19 engines with a total time between 1,500 and 2,000 hours; 5 engines had a total time between 1,000 and 1,499 hours; 5 engines were between 500 and 999 hours; and 4 engines had less than 499 hours total time. Seven of these engines had new camshafts installed, six camshafts were reground, and there was no information concerning the remaining six camshafts.

The submitter is presently working with the manufacturer to resolve this problem. At this time, a resolution for this problem has not been determined. This situation presents a serious hazard to safety of flight, and all personnel should thoroughly investigate any indication of engine oil contamination.

Part total times as previously stated.

ACCESSORIES

DEFECTIVE LIFERAFT

An FAA-certified repair station received a liferaft (Hoover Model 4600-119RB) for a scheduled inspection. The liferaft was received in a "packed" condition as it was removed from service.

When the technician opened the "pack," he discovered the mooring line was not attached to the inflation valve pull-cable. He did not offer any information concerning when or how the pull-cable was left unattached to the mooring line. If the mooring line is not properly attached, it renders the liferaft unusable during an emergency and defeats the purpose of having the liferaft installed.

The submitter suggested that personnel conducting inspections and maintenance on these units should give more attention to detail and the manufacturer's technical data.

Part total time not applicable.

UPDATE ON USE OF BLIND FASTENERS

This article updates a topic discussed on page 15 of the August 2000 edition of this publication. Since the original article, the National Transportation Board (NTSB) has issued Safety Recommendations that provide further information on blind fasteners versus solid fasteners.

The following data has been extracted from the NTSB Safety Recommendations. *(This article is published without editorial changes.)*

"Metallurgical examination of the wreckage of a Eurocopter BK-117 established that the separation was caused by fatigue cracking in multiple components of the vertical fin structure, including the skin and spar. Fatigue cracking was discovered at five locations in the vertical fin skin beneath the lower edge of the left yaw stability augmentation system (SAS) servo mount support. Fatigue cracks were also discovered in the vertical fin spar, which in effect partially severed the spar immediately adjacent to the noted skin cracks. The fatigue cracking of the skin originated at rivet holes common to the yaw and grew undetected to a length of approximately 5 1/2 inches before the ultimate separation of the vertical fin. The fatigue crack propagation in the skin was concealed by the installation of the yaw SAS servo, mount support.

Post accident testing conducted by Textron Aerospace Fasteners (TAF) and earlier testing conducted by Eurocopter consistently demonstrated that the joint fatigue life of materials fastened with blind rivets is less than the joint fatigue life of the same materials fastened with solid rivets. (TAF Test Report number C99-279, dated March 1, 1999 and Eurocopter Hausmiticilung Memo D/EE56-55/97, dated July 22,1997.) The Safety Board is concerned that maintenance personnel may install blind rivet applications where solid rivets are required, thereby reducing the structural fatigue life of an airframe."

Also, a revision to Advisory Circular 43.13-1B, Acceptable Methods, Techniques and Practices Aircraft Inspection and Repair, is in draft form and should be released soon. Below are the proposed text of Change 1: paragraph f:

"f. Blind rivets are used when there is access to only one side of the structure. Typically, the locking characteristics of a blind rivet is not as good as a driven rivet, Therefore, blind rivets are usually not employed when driven rivets can be installed.

CAUTION: For sheet metal repairs to the airframe, the use of blind rivets must be specifically authorized by the airframe manufacturer or approved by a representative of the FAA. Blind rivets should not be used on fuel cells, floats, or amphibian hulls below the water line."

The pre-evaluation of a repair by the mechanic must consider other factors when considering fastener substitution in a task. Accessibility to perform the repair may require the manufacturer to recommend special tools or techniques to accomplish the repair before opting to blind-fasteners. The environment of the repair (high vibration area) requires extra attention to the type of fasteners that could be used in a repair. The correct and appropriate use of technical data references is essential in determining the proper choice of replacement fasteners. Some sources of approved and acceptable technical data include:

1. Current manufacturer's data, such as service information, bulletins, manuals, and manufacturer-issued repair schemes.

2. FAA Airworthiness Directives; Type Certificate Data Sheets; Advisory Circular, (AC) 43.13-1B, Acceptable Methods, Techniques, and Practices-Aircraft Inspection and Repair; Designated Engineering Representative (DER); FAA approved or accepted industry standards, and FAA field approval data.

NOTE: Reference data such as: aviation industry specifications, standards, handbooks, and other data may not exist in paper form; however, they may be available in electronic media.

AIR NOTES

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

http://av-info.faa.gov/isdr/

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY PROGRAM DATA ON THE INTERNET

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction or Defect Reports, Service Difficulty Reports, or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is:

http://av-info.faa.gov

On this web site, select "Aircraft" along the top of the page, next select "Service Difficulty Reporting," and then select "Query SDR Data."

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may contact the web master or call Tom Marcotte at (405) 954-4391.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the "FedWorld" internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the "av-info" web site.

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to:

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Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**.

Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at:
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This web site also has view, search, E-Mail, and M or D submit functions.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between February 17, 2001, and March 21, 2001, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE	ENG MAKE	COMP MAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFT MODEL	ENG MODEL	COMP MODEL	PART NUMBER	PART LOCATION	FAA REPORT NO.	TSO
REMARKS						
			LIFE RAFT	FAILED	04/27/2000	
			FR46	SAFETY	20000522SH006	

DURING SCHEDULED MAINTENANCE, LIFE RAFT FUNCTIONALLY TESTED. THE INFLATABLE TUBE NR 1 FAILED TO INFLATE PROPERLY. FURTHER INVEST, REVEALED THE ASPIRATOR''S AIRFLOW BECAME BLOCKED WITH ITS OWN ANTI-CHAFING COATING FOR THE OUTLET. THIS COATING IS NORMALLY APPLIED DURING MFG OR ACCOMPLISHMENT OF MFG''S SB. SUSPECT THE COAT SEPARATED DUE TO ITS EXCESSIVE LENGTH (2.1250 INCHES) WHICH COVERS AN AREA OF FASTER AIRFLOW AND IS DIFFERENT FROM MFG''S SPEC LENGTH OF .50 TO .75 INCH. THE CONDITION IS NOT NORMALLY INSPECTED DURING SCHEDULED MAINT UNLESS RAFT FAILS FUNCTIONAL TEST. REF: HOOVER INDUSTRIES

	PWA	PWA	CASE	CRACKED	11/10/1999	
	PW118	PW118	3040190	ENGINE	CA991210097	

(CAN) ENGINE TEST OIL FOUND TO BE LEAKING FROM THE REAR INLET CASE. ETR NR0186, PROJECT NR 20000013. 4 CONFIRMED EVENTSON PW118 AVERAGING 20000 HRS AND 6 EVENTS ON PW123 ENGINES AVERAGING 11000 HRS. FATIGUE IS RESULTING FROM A LOCAL UNDERRADIUS AT THE JUNCTION REFER TO REPORT TC1280/1301. PWC IS PLANNING TO INSTUMENT AN ENGINE TO BETTER UNDERSTAND THE PHENOMENON.

	RROYCE	RROYCE	TURBINE	DAMAGED	11/24/2000	21214
	TAY65015	TAY65015	EU18671	ENGINE	CA010103009	10355

(CAN) U.S. AIRWAYS ESN 17339 WAS REMOVED FOR HIGH VIBRATION UPON STRIP. THE FOLLOWING WAS NOTED.1. HP TURBINE MIGRATED AXIALLY REARWARDS TO THE EXTENT THE HP1 TURBINE BLADE INNER PLATFORM REAR FACES CONTACTED THE HP2 NGV INNER PLATFORM FRONT FACES.2. THE ASSOCAITED LOCKING COUPLING SPLINES SHOW EVIDENCE OF WEAR TO A DEPTH OF 0.004.3. THE HPC SHAFT SPHERICALCOUPLING LOCKING TANGS ARE HEAVILY WORN SUCH THAT THE CIRCUMFERENTIAL WIDTH OF THE TANGS HAS BEEN REDUCED TO 0.110 WIDEAGAINST A WIDTH OF 0.165 IN THE UNWORN AREARS. 4. THERE HAVE BEEN NO OTHER FINDINGS MADE SO FAR THAT WOULD

AEROSP	TMECA		GEARBOX	FAILED	01/05/2001
SA365N1	ARRIEL1C		365A33600501	TAIL ROTOR	20010130CW009

INITIAL GRND RUN-UP, AFTER MJR INSP, A T/R GBX FAILURE WAS EXPERIENCED AFTER APPROX 15-20 MINUTES. AC JERKED SEVERAL TIMES ALONG THE YAW AXIS, WITH NR1 ENG RUNNING AT 68%NG AND NR2 AT 65%NG AN UNUSUAL NOISE WAS HEARD FRM TAIL ROTOR, SHUT DOWN WAS INITIATED, NOISE WORSENED. ROTOR BREAK WAS APPLIED WITHIN 10 REV OF COMING TO COMPLETE STOP FRM COAST DWN WITH ROTOR BREAK APPLIED, LOUD SQUEALING AND GRINDING NOISE WAS EMITTING FROM THE TAIL ROTOR AND COAST DWN CAME TO A RAPID BUT NOT SUDDEN STOP. INITIAL INSP REVEALED METAL PARTICLES ON TAIL ROTOR CHIP PLUG, OIL AND SPREAD FLEX COUPLING AT THE TAIL ROTOR OUTPUT FLNG FROM MAIN GBX. AFTER TR DWN & INSP, OUTER BRG OF INPUT HSG WAS DRY, GBX

AIRTRC	PWA		TURBINE	DAMAGED	08/06/2000
AT301	R1340AN1			ENGINE	20001102SH032

ENGINE DISASSEMBLED 10/4/00. EXTENSIVE DAMAGE TO POWER SECTION OF ENGINE DUE TO ENGINE OPERATION AFTER FIRST KNOWLEDGEOF MALFUNCTION. POSSIBLE CAUSE, LINK ROD BROKE AT LINK PIN AND DUE TO METAL

AMRGEN	LYC		GASKET	LEAKING	06/03/2000
AA1A	O235C2C			VACUUM/PUMP	20000920SH011

REPLACED VAC/PUMP OIL SEAL STD-208 AND GASKET SL-61183 (2 TIMES SL-61183). OIL WOULD LEAK OUT IN GREAT AMOUNT. SEAL/ GASKET DOES NOT HOLD OIL PRESSURE. THE ALUM/BODY HAD A SHAFT AND GEAR DRIVING THE VAC/PUMP. THERE IS A BORED/HOLE TO FEED OIL UNDER PRESSURE TO THE SHAFT.(X)

AMRGEN LYC PLUG FAILED 08/02/2000 800
AA5 O320E2G 60828 CYLINDER NR 2 20001120SH058
PISTON PIN PLUG IN CYLINDER NR 2 FAILED CATASTROPHICALLY ENLARGING PISTON BOSS AND WEARING INTO LOWER RING. ENGINE WAS800 SMOH, CYLINDERS .010 INCH OS (PLAIN STEEL). SCREEN LAST CHECKED 48 HOURS PREVIOUSLY. PRESSURE SCREEN BECAME PLUGGED WITH ALUMINUM FLAKES, OIL PRESSURE DROPPED AND PILOT NOTICED CHANGE. ALL OTHER CYLINDERS REMOVED. TWO OTHER PLUGS WORN BEYOND LIMITS. REPLACED ALL
AMTR LYC COMPUTER FAILED 01/11/1999
MK1 O235C NAVIGATIONAL SYS CA991210005
(CAN) ERRONIOUS DATA AND DATA BASE OPERATIONS IN CANADIAN AIRSPACE. ITEM IS TSO APPROVED MFG. AIRSPACE CLASSIFICATION ERRORS, VOR / AIRPORT & ARTECC ERRORS, EMERGENCY FEATURE SHOWING WRONG INFORMATION. ITEM ON HOLD AT SUBMITTERS REQUEST UNTIL THE DATA HAS BEEN ANALYSED BY THE DIRECTOR OF EVENTIDE. SUBSEQUENT CORRECTIVE ACTION HAS BEEN TAKEN 2000,03,13BY THE MANUFACTURER. SUBMITTER
AVIAT LYC GASKET MISSING 08/04/2000 49
A1B O360* LYC10 FILTER ADAPTER 20000919SH024
FILTER ADAPTER WAS MISSING PN MS28773-08 GASKET. AN6289-8D. NUT WAS NOT TORQUED. OIL FILTER ADAPTER WAS LEAKING.(X)
BAC LYC BRAERO SEAL DETERIORATED 11/17/2000 29370
146200A ALF502R5 BAE146200 SL4758 WING ROOT PNL CA001214013 (CAN) THE FLIGHT CREW REPORTED AN AIRFRAME VIBRATION BETWEEN 235 - 250 KNOTS IN CLIMB. INVESTIGATION REVEALED THAT THE AERODYNAMIC SEALS ON WING ROOT PANELS 285/286 CT WERE BADLY DETERIORATED. THE SEALS WERE REPLACED AND A SATISFACTORY TEST FLIGHT PERFORMED.
BBAVIA LYC FLOAT DAMAGED 12/14/2000 472
7ECA O235C1 30766 CARBURETOR 20001229SH011
CARBURETOR WAS OVERFILLING. UPON DISASSEMBLY, FOUND CARBURETOR GASKET, PN 16-B85, SAGGING AND THE METAL FLOAT, WHERE THE NEEDLE SEAT RUBS, WORN EXCESSIVELY AT THE FLOAT LEVER ADJUSTMENT TAB.(X)
BBAVIA GEAR BROKEN 08/15/2000 4900
8GCBC 71461R RT MLG 20000914SH007
UPON LANDING, RT GEAR LEG, PN 7-1461-R, FAILED AT AREA OF U-BOLT ATTACH CLAMP. FAILURE RESULTED IN DAMAGE TO RT WING, PROPELLER, ENGINE AND COWLING. AIRCRAFT IS USED FOR GLIDER TOWING FROM AN UNPAVED RUNWAY AND AVERAGES 3-5 TAKEOFFS AND LANDINGS PER HOUR. TOTAL CYCLES ON GEAR LEG ARE ESTIMATED TO BE BETWEEN 15,000 TO 20,000. CRACK APPEARS TO BE FATIGUE RELATED AND IS BEING INVESTIGATED BY THE NTSB LABORATORIES. SUBMITTER RECOMMENDED A LIFE-LIMIT BE ESTABLISHED FOR THESEGEAR LEGS. TIME SINCE LAST INSPECTION IS APPROXIMATELY 170 HOURS.(X)
BBAVIA LYC BBAVIA MOUNT CRACKED 07/21/2000 2334
8GCBC O360C2E 8GCBC 21583 LT FLAP CA000829012
(CAN) PILOT REPORTED A TENDENCY FOR A/C TO ROLL TO RIGHT, ON FULL FLAP SELECTION. VISUAL INSPECTION INDICATED L/H INBOARD FLAP MOUNT HAD CONSIDERABLE VERTICAL MOVEMENT. FURTHER INSPECTION REVEALED THAT INBOARD FLAP MOUNT LOWER ATTACHMENT POINT HAD BROKEN FREE.
BBAVIA RIB CRACKED 01/04/2001 2760
8KCAB 2707 VERTICAL STAB 20010205CW016 2760
DURNING ANNUAL INSPECTION , TAIL FIN FABRIC WAS FOUND BUCKLING APPROX 1 INCH AFT OF TOP LEADING EDGE. UPON FABRIC REMOVAL FOR HIDDEN DAMAGE INSPECTION THE FIN RIB WAS FOUND TO BE CRACKED AND BUCKLED AT FWD ATTACHING WELD. FURTHER INSPECTION REVEALED AFT ATTACHING WELD TO BE CRACKED ALSO, SUSPECTED CAUSE TO BE EXCESSIVELY TIGHTENED DRAG WIRES.
BEECH SKIN CRACKED 09/04/2000 15615
200BEECH FUSELAGE 20001017SH031
DURING EVENT NR 1 INSPECTION AND SPECIAL STRUCTURAL, BELOW FLOORBOARD FROM FORWARD PRESSURE BULKHEAD TO AFT PRESSURE BULKHEAD, A 1.50 INCH LATERAL CRACK WAS FOUND IN THE LOWER SKIN PANEL AT APPROXIMATE CENTERLINE OF AIRCRAFT ABOUT .50 INCHFORWARD OF BS 167.625. SUBMITTER STATED THIS WILL REQUIRE DOUBLER REPAIR.(X)
BEECH PWA DRAIN VALVE MISSING 12/04/1999
200BEECH PT6A41 710C4X FUEL FILTER CA991229058
(CAN) ON APPROACH THE RT ENGINE LOST PARTIAL POWER AND THEN FLAMED OUT COMPLETELY. PILOT NOTICED FLUCTUATING FUEL FLOWAND SELECTED STANDBY PUMP ON. AT THIS POINT THE PILOT NOTICED MINIMUM FUEL IN RT MAINTANK.INSPECTION FOUNDTHAT THE VALVE ASSEMBLY IS SWAGED INTO THE BODY OF THE FUEL FILTER.THE VALVE ASSEMBLY WAS MISSING AT THE POINT WHERE IT SHOULD HAVE BEEN SWAGED. THIS CAUSED A RAPID LOSS OF FUEL FROM THE RT FUEL TANK WHICH LED TO FLAME-OUT.
BEECH PWA PUMP BROKEN 10/17/2000
200BEECH PT6A41 02532330002 LT ENGINE 20001101SH022 873
LEFT ENGINE FLAMED OUT IN-FLIGHT, RESTART PROCEDURES TRIED, BUT ENGINE WOULD NOT START. EMERGENCY DECLARED, AIRCRAFT LANDED WITHOUT INCIDENT. TROUBLESHOOTING FOUND DRIVESHAFT FOR HIGH PRESSURE FUEL PUMP BROKEN. ENGINE OIL FILTER CHECKEDFOR METAL CONTAMINATION, NONE FOUND. DRAINS FOR FCU CHECKED FOR LEAKAGE, NONE FOUND. CAUSE FOR FAILURE IS STILL UNDERINVESTIGATION.(X)
BEECH MOUNT MISINSTALLED 01/04/2001
36BEECH 275 SERVO 20010302AP003
SERVO MOUNT (KM-275) WAS FOUND INSTALLED INCORRECTLY NOT ALLOWING FULL ENGAGMENT WITH THE SERVO (KS-270). SERVO MOUNT WAS FOUND INSTALLED ON TOP OF SERVO MOUNTING SHELF AND SERVO WAS INSTALLED UNDERNEATH SERVO MOUNTING BRACKET. THE SERVOMOUNTING BRACKET (SHELF) WAS FOUND BETWEEN THE SERVO AND SERVO MOUNT. INSTALLATION INSTRUCTIONS CALLS FOR SERVO (KS-270) AND SERVO MOUNT (KS-270) BE INSTALLED UNDERNEATH SHELF. RESEARCH OF AIRCRAFT RECORDS DID NOT SHOW ANY MAINTENANCE THAT WOULD HAVE RESULTED IN THIS IMPROPER CONFIGURATION. SUSPECT INCORRECT INSTALLATION WAS DONE AT INITIAL INSTALLATION OF THE AUTOPILOT SYSTEM.
BEECH CONT CONT PUMP LEAKING 10/02/2000 182
36BEECH IO550B 6429324 ENGINE 20001016SH003
AT 80 HRS TT, FWD SEAL VENT LINE STARTED DISCHARGING SMALL AMTS OF OIL IRREG. OIL ON OUTSIDE OF LT COWL SUSPECTED TO BE RESIDUAL OIL VENTING FROM HEAT. NO BLUE FUEL STAINS EVIDENT. THERE WAS A LOW PRESSURE WHEN PRIMING WITH BOOST PUMP, NOT OUT OF NORMAL RANGE. EGT CONFIRMED MIXTURE SO LEAN, IT WOULD DESTROY ENG BEFORE DEVELOPING POWER FOR TAKEOFF. VERIFIED FUEL PUMP LEAKING BY OPERATING BOOST PUMP WITH ENGINE OFF. FUEL FLOWED OUT VENT.(X)
BEECH BOLT MISSING 09/08/2000
58 AN3C15 TAIL PIPE 20000914SH009
AIRCRAFT IN FOR MAINTENANCE WITH MISSING FLANGE BOLTS, BOLTS NOT OF STAINLESS STEEL INSTALLED CAUSING FLANGE BOLT HOLES TO ELONGATE AND POSSIBLE PIPE SEPARATION. NEW AIRCRAFT RECEIVED WITH STANDARD BOLTS INSTALLED. NO INSTALL INSTRUCTIONS IN MM.(X)

BEECH CHANNEL CRACKED 10/10/2000 1729
58 9562001085 HORIZONTAL STAB 20001031SH008
FOUND RIGHT STABILIZER, FORWARD SPAR ATTACH CHANNEL CRACKED IN LOWER RADIUS. AREA VERY HARD TO ACCESS WITH MIRROR AND FLASHLIGHT. FOUND A CRACK IN A BARON IN THE SAME LOCATION PREVIOUSLY. CRACK IS FOUND WHERE THE MOUNTING CHANNEL PASSESTHROUGH THE FUSELAGE. STABILIZER MUST BE REMOVED TO REPLACE THIS CHANNEL. SUBMITTER SUGGESTED THIS ARM BE INSPECTED REGULARLY.(X)
BEECH DRAIN MAST BROKEN 10/18/2000 19
58 0024000133 FWD FUSELAGE 20001031SH028
SUBMITTER STATED BATTERY DRAIN MASTS HAVE BEEN CRACKED OR BROKEN OFF OF A LARGE NUMBER OF NEW B-58 AIRCRAFT. TIME VARIES FROM 20 HOURS TO SEVERAL HUNDRED HOURS.(X)
BEECH RIB CRACKED 09/14/1999 3747
76 1051000101 LT WING 20001031SH001
DURING A 100-HOUR INSPECTION INTERVAL, CRACKS WERE FOUND IN THE WING RIBS ADJACENT TO THE LEFT INBOARD AND OUTBOARD AILERON HINGE BEARING ATTACHMENT BRACKETS P/N 105-100011-51. BOTH CRACKS BEGAN AT THE AFT EDGE OF EACH RIB AND PROCEEDED FORWARD TO THE BOTTOM ATTACHING RIVET. REPAIRS MADE BY FABRICATING DOUBLERS FOR EACH RIB.(X)
BEECH LYC GASKET LEAKING 09/29/2000 1707
76 LO360A1G6 LW13388 OIL FILTER 20001019SH027
DURING ROUTINE MAINTENANCE, FOUND OIL FILTER CONVERTER GASKET LEAKING. AD 2000-18-53 DID NOT APPLY DUE TO INSTALLATIONDATE OF GASKET (12-18-97 OVERHAUL DATE). GASKET REPLACED WITH CHAMPION GASKET PN CH48211. RUN AND LEAK CHECK GOOD. OLD GASKET DID NOT APPEAR TO HAVE EXTRUDED.(X)
BEECH VENT LINE BENT 07/14/2000 3997
77 RT WING 20000920SH001
INITIAL FLIGHT INFORMATION REVEALED RIGHT FUEL TANK WOULD RUN DRY LONG BEFORE LEFT. AFTER MANY LEAK TESTS, THE FUEL VENTS WERE SET TO FACTORY SPECS. NEXT FLIGHT INDICATED THE REVERSE OF TANKS. THE FOLLOWING FLIGHTS AND ADJUSTMENTS OF FUEL VENTS LEFT AND RIGHT HAD PRODUCED FAIRLY EVEN FUEL TANK
BEECH CONTROL BROKEN 08/11/2000
95B55 5038901021 RT ENG 20000925SH009
PILOT REPORTED THAT ON CLIMB, RIGHT ENGINE WOULD NOT LEAN OUT. PILOT THEN TURNED BACK TO AIRPORT AND AN UNEVENTFUL LANDING WAS MADE. PILOT THEN DISCOVERED RIGHT ENGINE WOULD NOT SHUT DOWN WHEN MIXTURE CONTROL WAS PULLED BACK TO IDLE CUT-OFF. UPON INSPECTION BY MAINTENANCE, RIGHT ENGINE MIXTURE CABLE WAS FOUND WITH END PULLED OUT OF SWAGE AT FUEL CONTROL END.(X)
BEECH CONT PUMP DAMAGED 11/15/2000
95B55 IO470L 634053 ENGINE 20001129SH014
ALT BRACKET CONTACTING FUEL INLET FITTING DUE TO FITTING ''CLOCKING'' AND BRACKET LOCATION. FACTORY ZERO TIMED ENGINE. BOTH COMPONENTS FACTORY INSTALLED CAUSED LOSS OF FUEL IN-FLIGHT. ENGINE PUMP REPLACED WITH CONTINENTAL SUPPLIED O/H UNIT AND FOUND NEW PUMP FITTING TO CONTACTING ARM AS WELL. MODIFY ALT BRACKET PER CONTINENTAL REPS REQUEST. ALSO, FOUNDFITTING MILL SHAVINGS IN FITTING
BEECH PWA HARNESS BURNED 12/12/2000 183
B200 PT6A42 FUSELAGE 20001214SH001
WIRE BUNDLE SPIRAL WRAP MELTED AND CHAFING AGAINST THE BRAKE DE-ICE HEAT LINE WHERE IT MAKES THE TURN TO COME INTO THE FORWARD INBOARD PART OF WHEELWELL AT WS 85, ACCESS PANEL NR 13 AS SEEN ON CHAP 12-20-00 PAGE 249, FIG. 205 OF MM.(X)
BEECH RAYTHN ACTUATOR CRACKED 11/02/2000 1426
B300 505211958 LT FLAP 20001102SH030
NOTED DURING REMOVAL OF ACTUATOR FOR ROUTINE 1,200-HOUR LUBE THAT ACTUATOR PISTON WAS CRACKED FOR ENTIRE LENGTH IN AN APPROXIMATELY STRAIGHT LINE. A NEW P/N''D ACTUATOR AND ACTUATOR SHAFT WAS INCORPORATED ON AIRCRAFT, SN R-129, AND UP. REPLACED ACTUATOR WITH SUPERSEDING P/N 129-521050-1. DAMAGE MAY HAVE OCCURRED FROM FREEZING OF TRAPPED WATER EXPANDING PISTON INTERNALLY, OR, BRITTLE
BEECH PWA CASE CRACKED 09/28/2000 34511
B99 PT6A28 3013340 LEFT ENGINE 20001019SH029
DURING PROPELLER CHANGE ON LEFT ENGINE, A SERIES OF CRACKS WERE FOUND ON THE INBOARD EXHAUST FLANGE. THE FLANGE IS A PART OF THE POWER SECTION, SO FIELD REPAIR WAS NOT POSSIBLE. THE AFFECTED POWER SECTION WAS REPLACED WITH A SERVICEABLE POWER SECTION. A POSSIBLE CAUSE FOR THE CRACKED FLANGE MAY HAVE BEEN THE RESULT OF OVERTORQUING THE HARDWARE ATTACHING THE EXHAUST STACKS TO THE FLANGE.(X)
BEECH SPAR CORRODED 09/25/2000 2924
C23 LT AND RT WING 20001103SH005
INSPECTION OF LEFT AND RIGHT WINGS DUE TO ACCIDENT. EXFOLIATION CORROSION IN LOWER SPAR CAP WAS FOUND IN THE SAME AREAON LEFT AND RIGHT WING SPARS. CORROSION IS LOCATED JUST OUTBOARD OF SPAR SPLICE CONTINUING ON TO WING TIP OR SPAR END. DAMAGE IS EXTREMELY VISIBLE AND SHOULD BE FOUND DURING ROUTINE INSPECTION. WING LEADING EDGE IS FACTORY GLUED TO SPARIN THIS LOCATION. WING SPAR JUNK.(X)
BEECH HOUSING BROKEN 10/27/2000 500
C23 16981001127 NLG 20001127SH012
NOSE GEAR ASSEMBLY FELL OFF THE AIRCRAFT ON TAKEOFF. FOUND THE HOUSING HAD CRACKED OUT WHERE THE STEERING ASSY ATTACHES. THIS AREA SHOWED SIGNS OF BEING CRACKED FOR SOME TIME.(X)
BEECH LYC ALT AIR DOOR BROKEN 09/13/2000 30008
C24R IO360A1B6 16991007721 ENGINE 20000913SH028
DURING A FLIGHT LESSON, ENGINE LOST POWER AND AN EMERGENCY LANDING WAS MADE, NO INJURIES OR DAMAGE. DURING INSPECTION AFTER LANDING, ENGINE DEVELOPED POWER WHEN COLD. REMOVED AIR FILTER ELEMENT, DISCOVERED HEAT DAMAGE TO FILTER ELEMENT AND FOUND ALT AIR DOOR HAD BROKEN AWAY FROM ITS HINGE AND HAD BECOME LODGED IN THE INTAKE OF THE FUEL SERVO. AIRCRAFT INSPECTED 81 HOURS PREVIOUSLY WITH NO DEFECTS NOTED. SUBMITTER RECOMMENDED PAYING CLOSE ATTENTION TO THE ALT AIR DOOR DURING INSPECTION, INSTALLING A SCREEN TO PREVENT A TOTAL BLOCKING OF THE INTAKE IF DOOR FAILS, AND INSTALLING A DOUBLER OVER THE DOOR WHERE IT ATTACHES TO THE HINGE.(X)
BEECH PWA DRAG BRACE CRACKED 08/10/2000 13781
E18S9700 R985AN14B 404188446 LT MLG CA000829011
(CAN) DURING ROUTINE 100 HOUR INSPECTION OF AIRCRAFT THE L/H MAIN GEAR DRAG BRACE WAS FOUND TO BE CRACKED PERPENDICULARTO THE TUBE JUST ABOVE THE LOWER ATTACH POINT, ACROSS THE WELD. THE DRAG BRACE WAS REMOVED AND A SERVICEABLE UNIT WAS INSTALLED WITH MULTIPLE GEAR SWINGS PERFORMED.

BEECH RAYTHN LINER CORRODED 10/25/2000 6254
J35 FUEL BLADDER 20001025SH021
REMOVED BOTH MAIN FUEL BLADDERS DUE TO LEAKAGE. FOUND CORROSION UNDER FUEL BLADDERS. ATTEMPTED TO CLEAN CORROSION USING ACID ETCHING, LT BAY LINER HAD EXTENSIVE PITTING AND BLISTERING WHILE WORKING CORROSION WITH ABRASIVE WHEEL. FOUND CORROSION HAD EATEN THROUGH LINER IN ONE SPOT. TANKS APPEAR TO BE ORIGINALS, BOTH HAD 1957 DATES OF MFG STAMPED ON THEM. WATER APPEARED TO HAVE ENTERED AROUND MAIN FUEL CAP ACCESS PLATE THEN COLLECTED BETWEEN BLADDER AND BAY LINER. AFT WALL OF MAIN FUEL BAY IS THE WING SPAR. SUBMITTER RECOMMENDED SEALING PANEL WITH SEALING COMPOUND ON INSTALLATION, REMOVING BLADDERS AND INSPECTING BAY IF TANKS HAVE NOT BEEN REPLACED.(X)
BEECH MOTOR FAILED 11/18/2000
V35B 35380094 MLG 20001206SH020
DURING RETRACT TEST, LANDING GEAR MOTOR TRIPPED CIRCUIT BREAKER. TROUBLESHOOTING REVEALED EMERGENCY DOWN CRANK IMPOSSIBLE TO TURN. REPLACEMENT OF MOTOR RESOLVED PROBLEM. CONCERN THAT FAILED GEAR MOTOR COULD RENDER EMERGENCY CRANK INOPERATIVE RESULTING IN A WHEELS UP LANDING.(X)
BELL MOUNT CRACKED 01/17/2001 6177
206L3 206033004143 TAIL BOOM 20010205CW012
CRACK FOUND UNDER TAIL ROTOR GEARBOX AT AFT, RIGHT, MOUNT HOLE. CRACK WAS NOT SEEN UNTIL GEARBOX WAS REMOVED TO PERFORM ASB CRACK WAS ONE INCH LONG, GOING FOR AND AFT THRU HOLE.
BELL ALLSN ALLSN MOUNT CRACKED 11/28/2000 3
407 250C47B 23063354 23058145 NR 1 NOZZLE CA010117006
(CAN) ENGINE CAME IN FOR REPAIR FOR SMOKING ON SHUTDOWN. AFTER TESTING THE ENGINE, IT WAS NOTICED THAT THERE WAS OIL PRESENT IN THE NR1 NOZZLE AREA. UPON DISSASSEMBLY, A SMALL CRACK WAS FOUND ON THE NR1 NOZZLE MOUNT FACE. AFTER CLEANING, IT WAS NOTED THAT THE CRACK WAS NOW A HOLE. FURTHER INSPECTION REVEALED THAT THE NR8 OIL PRESSURE BORE WAS DRILLED TO .700 AND THE PRINT DIMENSION IS .595 TO .605. THE CUSTOMER AND THE MANUFACTURER WERE NOTIFIED OF THE DEFECT AND THE PART WAS RETURNED
BOLKMS JACKSHAFT CORRODED 09/01/2000 7928
BK117A1 1174120101 M/R CONTROLS 20000918SH015
DURING INSPECTION, FOUND MASSIVE AMOUNTS OF CORROSION INSIDE CYCLIC JACKSHAFT. SAME LOCATION AS FOUND AND REPORTED PREVIOUSLY ON ANOTHER AIRCRAFT 12-8-99. MANUFACTURER ALLOWS .4 MM ALMOST IMPOSSIBLE TO MEASURE. IT APPEARS LITTLE OR NO PAINT TREATMENT ON INTERIOR OF STEEL TUBE. THE TUBE HAS CASTINGS ON EACH END ANGLED UP AT 45 DEGREES WHICH INCREASES CHANCE OF GETTING FLUIDS INSIDE. THERE ARE NO PROVISIONS FOR DRAINAGE. SUBMITTER SUGGESTED MFG TREAT INTERIOR AND PROVIDEDRAINAGE. THE LAST TIME THIS OCCURRED IT TOOK 3 MONTHS FOR THIS FLIGHT CRITICAL PART OF AN AIRCRAFT STILL IN
BRAERO SLEEVE CORRODED 12/10/1999 5741
HS125700A S256UM50001A 819804484 BRAKE SYSTEM CA991229029
(CAN) DURING PREFLIGHT MAINT PERSONNEL OBSERVED BRAKE HOSE EXTERNAL COVERING DISCOLORED AND SWOLLEN. INSPECTION REVEALED SLEEVE HOLDING FITTING ON HOSE SEVERLY CORRODED RESULTING IN A HYD
CESSNA SEALANT FAILED 11/17/2000 7980
140 LT MAIN FUEL TNK 20001206SH027 556
LARGE PARTICLES OF SLOSHING TYPE FUEL TANK SEALANT WERE FOUND ON THE FUEL TANK FINGER SCREEN DURING A POST-ACCIDENT INSPECTION. THE SUBJECT ACFT HAD AN AUTOFUEL STC WHICH MAY NOT HAVE BEEN COMPATIBLE WITH THE SEALANT WHICH WAS APPLIED IN 1957.(X)
CESSNA CONT AIR FILTER DAMAGED 01/12/2001
150L O200A BA4106 ENGINE 20010306AP002
DURING ANNUAL INSPECTION THE AIR FILTER ASSEMBLY WAS REMOVED TO FACILITATE INSPECTION OF CARB AIRBOX AND HEAT VALVE. UPON REMOVAL, IT WAS NOTED THAT THE AIR FILTER FRAME DID NOT HAVE THE GASKET RETAINER LIPS AS REQUIRED BY AD 96-09-06. THE FILTER FRAME WAS MARKED WITH A MANUFACTURERS DATA LABEL IDENTIFYING IT AS A BA-4106 REVISION D. REVISION D IS TERMINATING ACTION FOR THIS AD AND INDICATES THE PRESENCE OF THE GASKET RETAINING LIPS ON THE FRAME. THE MANUFACTURER, WHEN CONTACTED, STATED THAT ALL REV. D FRAME ASSEMBLIES HAD A LETTER L METAL STAMPED IN THE LOWER FLANGE BEFORE ANODIZEING. THIS IDENTIFICATION WAS MISSING. THE SUBMITTER SPECULATES THAT AN
CESSNA SELECTOR INOPERATIVE 11/27/2000 4035
172B COCKPIT 20001207SH010
DURING ANNUAL INSPECTION, NOTED THE FUEL SELECTOR VALVE WOULD NOT SHUT OFF FUEL. THIS COULD BE A HAZARD IF AN IN-FLIGHT FIRE OCCURRED.(X)
CESSNA RIB DAMAGED 11/02/2000 1457
172K LT WING 20001207SH013
DURING A HIDDEN DAMAGE INSP, LT WING ASSY PN 0523005-83 FOUND LIGHT DAMAGE TO MID L/E SKIN AND 1 NOSE RIB, UNAPPROVED REPAIR FOUND TO AFT INBD SPAR ASSY. ALMOST ALL NOSE RIBS IN WING FOUND DAMGED, 10 IN ALL. A T/E RIB WAS CUT BY A FLAP CONTROL CABLE. 4 SKINS FOUND DAMAGED, OTBD L/E SKIN. RECORDS CHK BY OWNER SHOWED ACFT WING WAS REPAIRED AND RETURNED TOSERVICE. THE SPAR SPLICE WAS NOT DONE IAW CESSNA SM. RT WING INSP, FOUND RT WING WITH 7 DAMAGED NOSE RIBS 2 EACH L/E SKINS DAMAGED, AFT SPAR
CESSNA LYC FILLERCAP CRACKED 11/24/1999 8410
172L O320E2D 0526007203 FUEL CELL CA991229069 (CAN) DURING INSPECTION, MAINTENANCE NOTICED THE FUEL TANK FILLER NECK SEEMED TO FLEX MORE THAN NORMAL. AFTER TANK REMOVAL THE FILLER NECK WAS FOUND TO BE SEALED TO THE TANK WITH AN UNSPECIFIED SEALING COMPOUND. THE SEALER WAS REMOVED, REVEALING THE NECK TO BE CRACKED AROUND ITS ENTIRE
CESSNA MOTOR FAILED 10/13/2000 54
172N C1452501S FLAP 20001030SH014
FLAP MOTOR BURNED OUT. SUBMITTER STATED THEY PUT 2 NEW UNITS IN FROM CESSNA, CHECK OF ACTUATOR AND GEARBOX FOUND NO DEFECTS. TURNS FREELY. CHECKED WIRES, NO DEFECTS. UNKNOWN CAUSE OF FAILURES. DATE OF MANUFACTURE OF MOTOR NR 2 IS 7/99.(X)
CESSNA LYC PLUG MISSING 08/25/2000 3953
172N O320H2AD ENGINE SUMP 20001019SH028 557
AIRCRAFT WAS FLYING FROM TULSA/SILOAM SPRINGS, 8 MILES FROM SILOAM SPRINGS AIRPORT, PILOT REPORTED THE ENGINE OIL PRESSURE WAS FLUCTUATING FROM ZERO TO 60 PSI. ENGINE THEN STARTED TO VIBRATE SEVERELY BEFORE ENGINE COMPLETELY STOPPED. UPON INSPECTION OF AIRCRAFT, FOUND THE OIL QUICK DRAIN MISSING WHICH OBVIOUSLY CAUSED ENGINE TO LOSE OIL PRESSURE. SUBMITTER STATED QUICK DRAIN INSTALLED DID NOT HAVE A PROVISION FOR SAFETY WIRE.(X)
CESSNA LYC FIREWALL CRACKED 01/11/2001 882
172R IO360L2A 05530311 FUSELAGE 20010209CW007
FOUND 1.8 IN LONG CRACK IN FIREWALL. CRACK IS LOCATED BEHIND COWL SHOCKMOUNT BRACKET AT RIGHT FIREWALL STEP. REPAIREDCRACK IN ACCORDANCE WITH SB.

CESSNA	LYC	GYRO	FLUCTUATES	10/16/2000	916
172R	IO360L2A	102620422	INSTRUMENT PNL	20001103SH008	

DIRECTIONAL GYRO PRECESSES ABOUT 5 DEGREES EVERY 10 MINUTES IN-FLIGHT. WITH VACUUM SYSTEM TEST KIT INSTALLED, DG PRECESSES ABOUT ONE-HALF DEGREE EVERY 15 MINUTES. ON THE NEW CESSNA AIRCRAFT, THE INSTRUMENTS AS WELL AS THE INSTRUMENT PANEL ARE HARD MOUNTED TO THE AIRFRAME. SUBMITTER SUSPECTED THE VIBRATIONS CAUSED BY THE RUNNING ENGINE ARE TRANSMITTED DIRECTLY TO THE INSTRUMENTS AND ARE THE CAUSE OF THE PROBLEM.(X)

CESSNA		NUT	MISINSTALLED	10/04/2000	195
172S			RUDDER PEDAL	20001019SH023	

DURING A 100-HOUR INSPECTION, THE COPILOT''S LEFT PEDAL LOWER BOLT AND NUT WERE FOUND LOOSE. THE NUT WAS STILL IN NEW CONDITION AND HAD NEVER BEEN PROPERLY TORQUED. THE PLASTIC SELF-LOCKING FEATURE OF THE NUT HAD NEVER BEEN ENGAGED AND NO TORQUE SEAL HAD BEEN APPLIED.(X)

CESSNA		FIREWALL	CRACKED	10/17/2000	559
172S		05530313	FUSELAGE	20001121SH004	

FIREWALL HAD CRACK APPROXIMATELY .75 INCH STARTING AT LOWER LEFT COWL MOUNT TOWARDS BATTERY BOX MOUNT. CESSNA SB 98-53-02. PERTAINS TO THIS SITUATION, BUT IS ONLY ON 172R MODEL.(X)

CESSNA		BOLT	BACKED OUT	11/01/2000	823
172S		AN313A	PARK BRAKE	20001130SH004	

DURING PHASE 2 INSPECTION, PARKING BRAKE CROSSOVER CABLE, BELLCRANK BOLT WAS BACKED OUT AND RESTRICTING PILOT''S R-RUDDER PEDAL, FWD TRAVEL. WITH THE BOLT BACKED OUT OF THE BELLCRANK, PARKING BRAKE INOP. THE FIBERLOCK NUT WAS FOUND DOWN UNDER THE RUDDER PEDALS AND THE BOLT WAS BENT SLIGHTLY. NO PREVIOUS WORK ACCOMPLISHED ON PARKING BRAKE OR RUDDER PEDALS. IT IS ASSUMED THE NUT WAS NOT TIGHTENED ON INSTALL. THE ONLY WRITE-UP ON ACFT ENTERING PHASE INSPECT WAS PARKING BRAKE INOP. SUBMITTER RECOMMENDED THE AN3-13A BOLT SECURING THE PARKING BRAKE CROSSOVER CABLE BELLCRANK PN 0713070-9 BE INSTALLED FROM RT TO LT INSTEAD OF PRESENT INSTALL LT TO RT.(X)

CESSNA		SUPPORT	CRACKED	09/01/2000	1608
182R		07120591	BATTERY BOX	20000920SH016	

ON INSPECTION OF AIRCRAFT, FOUND LEFT AND RIGHT BATTERY BOX SUPPORTS CRACKED IN BEND RADIUS, P/N 0712059-1. 24V BATTERY LOCATED IN TAIL SECTION OF AIRCRAFT. NOTE: THIS PROBLEM HAS BEEN FOUND IN OTHER

CESSNA		TUBE	BROKEN	10/10/2000	2342
210		12430714	NLG	20001109SH037	

THE TUBE WELDED ASSY WHICH STEERS NOSE GEAR, ARM BROKE THE WELD ON THE TUBE WHICH ALOWED THE NOSE WHEEL TO SWIVEL AND COLLAPSED THE NOSE WHEEL ON LANDING.(X)

CESSNA		ACCUMULATOR	CRACKED	12/29/2000	
210L		12810331	MLG	20001229SH010	

FOUND ACCUMULATOR LEAKING. CLEANED AND CYCLED GEAR. FOUND ACCUMULATOR LEAKING FROM CRACK IN MACHINED CASTING SEAM. CRACK IS ONLY VISIBLE WITH 10X MAGNIFICATION. CAUSE - POSSIBLE CASTING FLAW.(X)

CESSNA		TORQUE TUBE	CRACKED	11/21/2000	
310Q		504501019	LT MLG	20001207SH016	

AFTER TAKEOFF, PILOT ADVISED BY GROUND OBSERVERS, LT MLG STILL DOWN. GEAR CYCLED SEVERAL TIMES, GROUND OBSERVERS REPORTED LT MAIN GEAR STILL DOWN. GEAR SELECTED DOWN, SAFE LANDING. INSP SHOWED LT M/G TORQUE TUBE, PN 5045010-19, CRACKED,FAILED. CRACK APPEARED TO ORIG BTWN THREADED BOSS WHERE FORK BOLT PN 5141052-1 LATCHES, AND AFT FLANGE OF AFT PIVOT BOLT MOUNTING BRACKET. AREA OF BOSS, CRACK RUSTED FOR APPROX 1.5 INCHES INDICATING PRE-EXISTING CONDITION. CRACK EXTENDSAXIALLY AFT FOR 2 INCHES, THEN EXTENDS RADIALLY FWD OF BOSS FOR APPROX 5 INCHES TO 6 INCHES SPIRALLING AROUND TUBE. INSP OF INTERIOR OF TORQUE TUBE SHOWED NUMEROUS SPOTS OF CORROSION WITH A CONCENTRATION OF RUST AT

CESSNA		BOLT	SHEARED	09/22/2000	
402B		50410011	LT MLG	20001019SH009	

BOLT, P/N NAS464P4, SHEARED CAUSING SIDE LOAD ON THE BELLCRANK BREAKING THE ATTACH POINT AT THE GEAR LIGHT SAFETY SWITCH.(X)

CESSNA		ESCAPE HATCH	DEPARTED	11/05/2000	10771
402B		52111302	FUSELAGE	20001120SH039	

ESCAPE HATCH DEPARTED AIRCRAFT AT 2,200 FEET, SIX MILES WEST OF LANCASTER AIRPORT. NO DAMAGE WAS FOUND ON THE AIRCRAFT. INSPECTION OF THE FRAME, OF THE ESCAPE HATCH OPENING, FOUND NOTHING BROKEN IN THE RETAINING SYSTEM. IT APPEARED THE RETAINING PINS VIBRATED OUT ENOUGH TO ALLOW THE HATCH TO BE PULLED OUT BY THE WIND.(X)

CESSNA		TORQUE TUBE	CRACKED	09/21/2000	424
421B		504501033	LT MLG	20001031SH027	

LEFT MAIN LANDING GEAR WOULD NOT RETRACT. FOUND LARGE CRACK AT LEFT MAIN LANDING GEAR TORQUE TUBE. NOTHING ABNORMAL WITH GEAR RIGGING, CRACKED FROM STRESS OF CONTINUED USE. REPLACED TORQUE TUBE WITH NEW FROM FACTORY. RECHECKED LANDING GEAR RIGGING PER CESSNA MM.(X)

CESSNA		CONTROL BOX	CHAFED	10/30/2000	
501		RI106	COCKPIT	20001030SH032	

ELEVATOR TRIM CHAIN IN PEDESTAL CHAFED ON SPERRY RI-106 REMOTE CONTROL BOX. CASE OF CONTROL BOX WAS SEVERLY WORN. IT WAS EVIDENT THIS CONDITION EXISTED FOR SOME TIME. THIS COULD HAVE POSSIBLY LED TO JAMMING OF THE ELEVATOR TRIM SYSTEM. UNIT WAS REMOVED AND AIRCRAFT WAS FERRIED TO A CITATION SERVICE CENTER FOR REPAIR.(X)

CESSNA		BULKHEAD	CRACKED	01/03/2001	6193
T210M		12210624	RT WING	20010302AP001	

FOUND RIGHT WING INBOARD FLAP BELLCRANK BULKHEAD STA.54.75 CRACKED. CRACK WAS LOCATED LEFT LOWER CORNER OF BULKHEAD (LOOKING FWD) AND APPROX. 1.5 INCHES LONG. AIRCRAFT HAS ROBERTSON STOL KIT INSTALLED. SUSPECT HIGHER CABLE TENSIONS BECAUSE OF STOL KIT CONTRIBUTED TO THE CRACKING. THIS IS THE THIRD AIRCRAFT FOUND WITH THIS PROBLEM, ALL WITH SIMILAR AIRFRAMETOTAL TIME.

DHAV	PWA	ROD	WRONG PART	10/25/2000
DHC2MK1	R985AN14B	C2CF451ND	LT AILERON	CA001106015

(CAN) UPON INSPECTION, THE LT AILERON PUSH ROD WAS FOUND TO BE NOTICEABLY HEAVIER THAN THE OTHER. THE TUBE WAS CHECKED WITH A MAGNET AND FOUND TO BE STEEL. NO RECORD CAN BE FOUND OF STEEL PUSH RODS BEING APPROVED FOR DHC-2 BEAVER AIRCRAFT - SUSPECT BOGUS PART. THE TUBE SECTION WAS REPLACED WITH AN

DHAV	PWA	FUEL LINE	CRACKED	12/03/1999
DHC2MK1	R985AN14B		QUANTITY IND	CA991229021

(CAN) FUEL PRESSURE LINE FROM FIREWALL TO GAGE. ONE END FITTING CRACKED RESULTING IN A FUEL LEAK IN THE COCKPIT. FUEL SMELL WAS NOTED BY THE PILOT ON LASTTRIP. LINE REPLACE BEFORE FURTHER FLIGHT. THIS PROBLEM & SAFETY ISSUE WAS BROUGHT UP 2 YRS AGO. ALT FUEL PRESS IND STC ARE AVAILABLE IN THE US.

DHAV PWA CONTROL FRAYED 08/17/2000 302
DHC3 PT6A34 C3CF1975R 7X19 FLIGHT CONTROLS CA000829015
(CAN) WHILST CARRYING OUT AN 800 HOUR INSPECTION OF THE AIRCRAFT, SEVERAL CABLES WERE FOUND THAT HAD A QUANTITY OF BROKEN STRANDS BEYOND THE ALLOWABLE LIMITS. THIS IS ONE OF TH CABLES THAT WAS FOUND. IT SHOULD BE NOTED THAT THE AIRCRAFT MANUAL STATES THAT THE CABLES MUST BE INSPECTED THROUGHOUT THEIR ENTIRE LENGTH. IN ORDER FOR THIS TO BE ACCOMPLISHED, THE CABLES MUST BE REMOVED FROM THE AIRCRAFT. IT SHOULD BE NOTED THAT THESE DEFECTIVE CABLES WOULD NOT HAVE BEEN FOUND BY INSPECTING THE CABLES WHILE STILL INSTALLED ON THE AIRCRAFT.
DHAV PWA PWA ENGINE MALFUNCTIONED 12/08/2000 25473
DHC8102 PW120A PW120A NR 2 ENGINE CA010111025
(CAN) DURING DESCENT SMOKE REPORTED IN CABIN. CREW NOTICED NR2 ENGINE ITT SPIKING ALSO NOTED VIBRATION AND SPUTTERING NOISE. ENGINE SHUT DOWN, EMERGENCY DECLARED. A/C LANDED WITHOUT INCIDENT. INSPECTION FOUND METAL IN JET PIPE AND METAL PARTICLES ON CHIP DETECTOR. ENGINE NR2 REPLACED, GROUND RUN AND LEAK CHECK SATISFACTORY, A/C RETURNED TO SERVICE.FURTHER TO INITIAL REPORT: FURTHER INVESTIGATION ON TEAR DOWN REPORT SHOWED THAT NR5 BEARING WAS DESTROYED DUE TO OIL NOZZLE LASTCHANGE SCREEN COMING ADRIFT AND DESTROYING THE BEARINGS. THE SCREEN WAS CONTAMINATED WITH
DIAMON BOOT LOOSE 12/05/1999
DA20A1 620075 COCKPIT CA991229045
(CAN) DURING PRE-FLIGHT WALK AROUND THE PILOT NOTICED THAT THE AILERON TRAVELS WERE NOT EQUAL ON THE LEFT AND RIGHT.ITWAS FOUND THAT THE BOOT AT THE BASE OF THE CONTROL STICK HAD MIGRATED DOWN AND SNAP FASTENERS AT THE TOP OF THE BOOT HAD LODGED BETWEEN THE CONTROL STICK AND THE SEAT PAN.THE BOOT WAS REPOSITIONED AND SECURED WITH A TIE WRAP.
DIAMON GASCOLATOR LEAKING 09/05/2000 110
DA20C1 2228215100 FUEL TANK 20000920SH012
GASCOLATOR BOWL CANNOT BE SECURED TO PREVENT LEAKING AT BOWL GASKET AREA. ANY SIDE LOAD CAUSES EXCESSIVE LEAKING. LEAKS AT JOINT OF HOUSING AND BOWL.(X)
DOUG PITCH SLIDER CORRODED 09/08/2000 601
600N 500N53673 NOTAR FAN 20000925SH007
DURING REMOVAL OF NO TAIL ROTOR (NOTAR) FAN BEARING, DISCOVERED THE FAN PITCH SLIDER, P/N 500N5367-3, AND FAN SUPPORT SHAFT, P/N 500N5357-11, HAD PITTING CORROSION. A NEW SUPPORT SHAFT AND SLIDER WERE INSTALLED. WITH NEW PARTS INSTALLED,A CONDITION OF EXCESSIVE BINDING OF THE FAN PITCH SLIDER EXISTED. IN CONJUNCTION WITH MD HELICOPTERS TECH REPS, DETERMINED THE TORQUE APPLIED TO THE PITCH SUPPORT SHAFT LOCKNUT P/N NAS1493-6F (60 TO 70 FEET/POUNDS AS SPECIFICIED IN THE HANDBOOK OF MAINTENANCE INSTRUCTIONS) WAS EXCESSIVE AND WAS THE MAJOR CONTRIBUTING FACTOR OF THE BINDING OF THE PITCH SLIDER.
ENSTRM TUBE CRACKED 01/16/2001 5503
280F GEARBOX MOUNTS 20010130CW008
4130 TUBING WAS FOUND CRACKED BETWEEN LEFT FORWARD GEARBOX MOUNT AND LEFT REAR GEARBOX MOUNT. PROBABLE CAUSE, METAL FATIGUE. AC IS 20 YR OLD WITH 5503 HRS. AC DID HAVE HARD LANDING YEARS AGO AT LESS THAN 1000 HRS ON AIRFRAME. POSSIBLE FRAME WAS SUBJECTED TO ADDITIONAL STRESS FROM THE HARD LANDING. RECOMMEND OPERATORS TO INSPECT AIRFRAME TUBING IN THIS AREA FOR POSSIBLE CRACKS.
GULSTM SEAT BROKEN 09/01/2000 1990
114 49205503 PILOT SEAT 20000918SH023
SEAT FRAME TUBE FAILED AT LOCATIONS RESULTING IN SEAT BACK GOING TO A FULL RECLINE POSITION. SEAT FRAME HAD BEEN MODIFIED PER SB 114-21A, REF AD 85-03-04R2.(X)
GULSTM CHANNEL CRACKED 01/12/2001 10645
690A 310704 1 310704 WING ROOT E27R1730
DURING PRESSURAZATION LEAK CHECKS, THE CABIN WAS FOUND TO HVE TWO LARGE LEAKS IN LT AND RT WING ROOT AREA. ON EXAM OF THE SUSPECT AREAS IT WAS FOUND THAT THE LT AND RT SUPPORT CHANNELS PN310704-1 AND 310704-2 HAD FAILED FROM FS 144 WL10 TO FS 175 WL 14. THE FAILURE IS IN THE FORM OF A CRACK ON THE VERTICAL OB PORTION OF THE CHANNELS FROM RIVET TO RIVET. THIS FAILURE ALLOWED THE AIRCRAFT SKIN TO PULL AWAY FROM ITS SUPPORTING STRUCTURE ABOVE THE PICTURE WINDOWS IN EXCESS OF.25 IN.
GULSTM SKIN CORRODED 11/01/2000 4042
690A LT/RT NACELLE 20001120SH059
DURING 100-HOUR INSPECTION, AIRCRAFT NACELLE AREA FOUND THE UPPER ENGINE MOUNT ATTACH STRUCTURE STEEL STRAPS HEAVILY CORRODED. UPON REMOVAL OF THE UPPER NACELLES ON THE LEFT AND RIGHT SIDES OF THE AIRCRAFT, FOUND HEAVY PITTING AND WIDE SPREAD CORROSION OVER THE TOP SURFACE OF THE WING AS WELL AS CORROSION AND PITTING EXTENDING UNDER THE STEEL STRAPS.(X)
HUGHES SHAFT CRACKED 05/08/2000 1286
269C1 269A54979 MAIN ROTOR CA000516018
(CAN) FOLLOWING 1.8 HOUR FLIGHT AND AT BEGINNING OF APPROACH TO AIRFIELD, A BANG WAS HEARD AND A LOW POWER AUTOROTATIONWAS CARRIED OUT. ROTORCRAFT WAS LEFT RUNNING FOR ENGINEER TO INSPECT. A VIBRATION WAS FELT THROUGHOUT THE CABIN (MOSTLYIN THE FLOOR) & LOWER PULLEY WAS VIBRATING. INSPECTION AFTER SHUT-DOWN REVEALED A VISUAL CRACK ON THE FORWARD PART OF SHAFT LOCATED UNDER THE BEARING (SHAFT IS STAINLESS). THE CRACK WAS 1.5 INCH LONGITUDINAL AND 2 ING AROUND THE SHAFT
HUGHES ALLSN SHIM SPLIT 12/13/2000
369D 250C20B 369D255013 369A5516 TAIL ROTOR CA010110007
(CAN) DURING TAIL ROTOR GEARBOX REPLACEMENT, IT WAS NOTED THAT THE TORQUE WAS LOST ON THE KAMATIC COUPLING BOLT. FURTHER INVESTIGATION REVEALED THE SHIMS BETWEEN COUPLING AND TAIL ROTOR GEARBOX WERE FOUND SPLIT DUE TO COUPLING BOLT TORQUE.MAINTENANCE MANUAL INSTRUCTIONS FOR INSTALLATION OF KAMATIC COUPLINGS CALL FOR ALL SHIMMING TO BE DONE AT THE MAIN ROTOR TRANSMISSION. HOWEVER FIGURES IN THE MAINTENANCE MANUAL SHOW SHIMS UNDER TAIL ROTOR GEARBOX COUPLING.OPERATOR HAS CHECKED ALL 8 LIKE AIRCRAFT AND REMOVED ANY SHIMS FROM AFT COUPLING AND INSTALLED ON FORWARD COUPLINGS.
LEAR GE HYDRAULIC CHAFED 01/09/2001
25D CJ6108 2407003487 TAILCONE 20010205CW013
PILOT LOST HYDRAULIC PRESSURE IN FLIGHT. INSPECTION REVEALED HYDRAULIC PRESSURE LINE FROM LEFT ENGINE TO AUXILLARY HYDRALUIC PUMP MANIFOLD LINE, CHAFFED AT CLAMP, RECOMMENDED REMOVING CLAMPS ON THIS SPECIFIC HYDRAULIC LINE ON AIRCRAFT WITH THE SAME HYDRAULIC SYSTEM SETUP.
LKHEED CASTING FAILED 08/31/2000
12A RT WW 20001019SH014
RIGHT FLANGE OR GEAR DRIVE CASTING FAILED UNDER LOAD DURING LANDING. THIS CAUSED THE JACK SCREW TO BEND ALLOWING THE RIGHT MAIN LANDING GEAR TO COLLAPSE.(X)

MAULE MUFFLER CRACKED 10/13/2000 151
M7235B LEFT EXHAUST 20001129SH019
DURING ANNUAL INSPECTION, NOTED THE LEFT MUFFLER WAS CRACKED AT THE END PLATE WHERE IT HAD BEEN WELDED DURING ASSY. THE CRACKS RAN PARALLEL TO WELDS AND SHOWED EVIDENCE OF EXHAUST LEAKAGE.(X)
MAULE TAILPIPE CRACKED 10/13/2000 151
M7235B LT EXHAUST 20001129SH020
DURING ANNUAL INSPECTION, NOTED THE LEFT TAILPIPE CRACKED AT THE MOUNTING SUPPORT TAB APPROXIMATELY 95 PERCENT OF PIPE DIAMETER. CRACK HAD ORIGINATED FROM WELD ON TAB. PART FAILED ON
PIPER SELECTOR WORN 08/02/2000
PA22108 11383004 LT CABIN WALL 20000913SH021
FUEL SELECTOR VALVE IS HARD TO SET IN THE DESIRED POSITION WITHOUT LOOKING AT IT. THE DETENTS ARE NOT POSITIVE ENOUGH AND THE SELECTORS GET STIFF IF NOT USED ENOUGH.(X)
PIPER TRUSS BROKEN 12/12/2000
PA23160 1713701 RT ENGINE 20010205CW020
WHILE PERFORMING OTHER MAINTENANCE ON RT ENGINE, TECH NOTICED BROKEN ENGINE TRUSS. TRUSS MEMBER COMPLETELY BROKEN IN HALF. CAUSE OF FAILURE BELIEVED TO BE SEVERE CORROSION ON THE INSIDE OF THE STEEL TUBE CONSTRUCTED TRUSS MEMBERS. SUGGEST REPLACING WHOLE LANDING GEAR/ ENGINE TRUSS ASSEMBLY. AC HAD RECIEVED RECENT INSPECTION.
PIPER HYDRAULIC CHAFED 08/28/2000
PA23250 3152700 LT OF PILOT SEAT 20000912SH010
UPON INSP, FOUND THE LEFT RUDDER CABLE CHAFING ON HYD LINE ATTACHED TO THE LEFT LANDING GEAR SEQ VALVE . THE CABLE HADCHAFED THRU APPROX 50 PERCENT OF THE HYD LINE OVER A 2 INCH AREA. LOCATION OF AREA IS BEHIND THE PANEL ON THE LEFT SIDE OF THE PILOT SEAT. THE LINE IS ON THE BOTTOM OF A GROUP OF LINES WHICH ARE SECURED TOGETHER BY STAND-OFF LACING. RUDDER CABLE IS ROUTED SLIGHTLY DIAGONALLY
PIPER BOLT BROKEN 10/27/2000
PA23250 AN643 NOSE GEAR 20001120SH060
FOUND UPPER BOLT (AN6-43) IN NOSE GEAR DRAG LINK BROKEN WHERE DRAG LINK ATTACHES TO AIRFRAME STRUCTURE. AIRCRAFT HAD 8,600 HOURS TOTAL TIME. TOTAL TIME IN SERVICE OF BOLT UNKNOWN. AIRCRAFT OPERATED FROM TURF AND PAVED RUNWAYS.(X)
PIPER RIVET SHEARED 11/27/2000
PA24250 WING ATTACH 20001127SH015
DURING ANNUAL INSPECTION, FOUND SHEARED RIVETS AT BOTH REAR WING ATTACH FITTINGS AS FOLLOWS: BS 136 RT SIDE, ALL RIVETS SHEARED THRU PLATE PN 23662-00, FITTING ASSY P/N 23663-00, DOUBLER P/N 23664-02. EXTENSIVE MOVEMENT BETWEEN PLATE ANDFITTING ASSY CAUSED ANGLE P/N 20554-16 TO SHEAR IN TWO. LT SIDE MUCH THE SAME EXCEPT 2 RIVETS REMAINING, ANGLE HAS NOTCOMPLETELY SHEARED THROUGH. AIRFRAME TT
PIPER BOLT MISINSTALLED 10/31/2000
PA28R200 AN625 DRAG BRACE 20001031SH026
BOLTS IN UPPER NOSE GEAR DRAG BRACE ASSY, SECURING TO ENGINE MOUNT ARE INSTALLED BACKWARDS. LARGE DIAMETER STEEL WASHERS, TEFLON WASHERS ARE ALSO INSTALLED INCORRECTLY PER PAC DRAWING, IPC, AND SM.
PIPER LYC ENGINE FAILED 12/15/2000
PA31 TIO540A1A RIGHT CA010110009
(CAN) ON CLIMB OUT FROM YXD, THE PILOTS NOTICED FLAMES FROM INSIDE THE ENGINE COWL ACCESS DOOR ON RT ENGINE. FOLLOWING FLIGHT MANUAL PROCEDURES, THEY THEN SHUT DOWN THE ENGINE AND FEATHERED THE PROPELLER. THEY THEN MADE AN UNSCHEDULED LANDING IN YEG WHERE MAINTENANCE HAD A LOOK AT THE ENGINE. THE BURNT REMAINS OF, WHAT IS THOUGHT TO BE, A SHOP RAG WAS FOUND IN THE AFT OF THE ENGINE COWL. THE REMAINS WERE REMOVED, THE ENGINE INSPECTED FOR FIRE DAMAGE, AND THE AIRCRAFT RETURNED TO SERVICE.THERE WAS NO FIRE DAMAGE NOTED AT TIME OF INSPECTION.
PIPER FUEL LINE LEAKING 01/12/2001
PA32301T 67700322 BAGGAGE AREA 20010306AP001
PILOT REPORTED STRONG FUEL ODOR IN CABIN. INVESTIGATION REVEALED FUEL LEAKING FROM FLARELESS FITTING SLEEVE AT BULKHEADFITTING AFT OF FIREWALL BELOW THE NOSE BAGGAGE AREA FLOOR. FUEL WAS CARRIED BACK INTO THE CABIN AREA INSIDE THE PLASTICCHAFF SLEEVE COVERING THE LINE. THE PLASTIC CHAFF COVER WAS SPLIT IN THE CABIN AREA AND FUEL DRIPPED BEHIND THE SIDE PANEL. REPLACED LINE ASSEMBLY. SUSPECT FLARELESS FITTING SLEEVE BECAME LOOSE DUE TO VIBRATION AND AGE.
PIPER CONTROLLER WORN 09/19/2000 2441
PA32R300 6841403 ELEV TRIM CNTRL 20000919SH025
DATE OF OCCURRENCE: 12-11-90 PILOT REPORTED THAT ATTEMPT TO MANUALLY ADJUST STABILATOR TRIM FAILED. EXAMINATION REVEALED THAT PLASTIC TRIM CONTROL WHEEL WAS WORN IN AREA OF DETENT RECEPTACLE THAT ENGAGES BALL SWAGED ON CONTROL CABLE. CONTROL WHEEL WAS REPLACED WITH NEW AND TRIM CONTROL WAS RIGGED PER PIPER PA-32 SERIES SERVICE MANUAL. SUBMITTER SUSPECTED THAT DUE TO RELATIVELY LOW TIME OF PART/AIRCRAFT, DAMAGE POSSIBLY OCCURRED DUE TO ATTEMPT TO OVERRIDE FAILED OR LOCKED UP ELECTRIC TRIM SYSTEM BY APPLYING EXCESSIVE FORCE TO CONTROL.(X)
PIPER SWITCH MALFUNCTIONED 12/04/2000 368
PA34220T 75775694E423 COCKPIT 20001218SH031
DURING SCHEDULED INSPECTION WHEN HEATER SWITCH SELECTED ON, HEATER DID NOT IGNITE. FUEL WAS DRAINING FROM DRAIN. TROUBLESHOOTING DETERMINED NO COMBUSTION AIR FLOW AND CONTINUITY BETWEEN THE TERMINALS OF P/N 94E42-3, (PIPER P/N 757-756) COMBUSTION AIR SENSE SWITCH. COMBUSTION AIR BLOWER MOTOR BRUSHES WERE SHORT, AND WERE REPLACED. COMBUSTION AIR SWITCH WAS REPLACED WITH NEW. GROUND OPERATIONAL TEST WAS SATISFACTORY.(X)
PIPER LYC NEEDLE SEAT OBSTRUCTED 09/14/2000
PA38112 O235L2C MA3A CARBURETOR 20000914SH014 400
LOSS OF POWER AND SUBSEQUENT OFF-AIRPORT LANDING OCCURRED AFTER DARK. REMOVABLE “”TANG”” FROM A HELICOIL WAS FOUNDIN THE FINGER SCREEN CAVITY STUCK IN THE HOLE OF THE SEAT (OF THE NEEDLE AND SEAT) STOPPING FUEL FLOW TO THE FLOAT BOWL.(X)
PIPER LYC LYC BEARING MAKING METAL 12/01/2000 176
PA46350P TIO540AE2A TIO540AE2A ENGINE CA010110017
(CAN) DURING A SCHEDULED OIL/FILTER CHANGE, METAL PARTICLES WERE FOUND IN THE ENGINE OIL SCREEN. IN REFERENCE TO PIPER VSP-127 AND TEXTRON LYCOMINGS SPECIAL ADVISORY 59-800, SAMPLE WAS SENT TO TEXTRON FOR ANALYSIS. AS PER THE SERVICE ADVISORY THE AIRCRAFT WAS GROUNDED. TEXTRON REPORTED THEIR FINDINGS TO BE THAT THE CONTAMINATION WAS ALUMINUM WITH 5% IN CONTENT FROM THE BEARING INSERTS. ENGINE WAS REMOVED AT THEIR INSTRUCTION AND SENT TO THE FACTORY FOR WARRANTY REPAIR.

SKRSKY	GE	SKRSKY	HUB	TORN	12/06/2000	8401
S61N	CT581401	S61152050104	S611520502042	BLADE POCKET	CA010108019	

(CAN) DURING SHUTDOWN PILOTS NOTICED A WHISTLING SOUND COMING FROM MAIN ROTOR BLADES. DURING A VISUAL INSPECTION AFTER ROTORS HAD STOPPED A POCKET LOWER SKIN WAS SEEN TO BE MISSING. ROTOR BLADE WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE.

SKRSKY		NASH	PUMP	LEAKING	11/04/1999	
S64*				FUEL SYSTEM	20000518SH016	

UNIT WAS RETURNED TO STOCK FOR REPAIR. TAG READS LOW PUMP OUTPUT OR INTERMITTENTLY INOPERATIVE. BENCH CHECKED UNIT, FOUND TO BE LEAKING INTERNALLY DOWN WIRE HARNESS AND TO BE INTERMITTENTLY SHORTED. REPAIR IS TO REPLACE WITH AN EXTERNALMOUNTED TYPE FUEL PUMP.(X)

SNIAS	TMECA		BLADE	CRACKED	12/08/2000	2756
AS350B	ARRIEL1B		355A12004008	T/R HUB	CA010112018	

(CAN) 15 MM CRACK ON TRAILING EDGE ON UPPER AND LOWER SURFACE ORIGINATING UNDER TRIM TAB. SEE ATTACHED PHOTO WITH TRIM TAB REMOVED. NOT DETECTED UNTIL TRIM TAB REMOVED FOR ANOTHER REASON. TC COMMENTS: THIS PARTICULAR BLADE HAS A LIFE OF 4000 HOURS BUT WAS FOUND CRACKED AT 2756.3 HOURS. THIS IS SECOND TIME ORIGINATOR HAS FOUND A CRACK IN THIS AREA AT TE TRIM TAB (SEE SDR 20010112017).

SNIAS			BLADE	CRACKED	12/08/2000	1863
AS350B2			355A12004008	T/R HUB	CA010112017	

(CAN) 40 MM CRACK ON TRAILING EDGE TOP AND BOTTOM SURFACE ORIGINATING UNDER TRIM TAB. SEE ATTACHED PHOTO WITH TRIM TAB REMOVED. TC COMMENTS: THIS PARTICULAR BLADE HAS A 4000 HOUR LIFE AND WAS FOUND WITH CRACK AT 1862.8 HOURS TSN. ORIGINATOR REPORTS THAT THIS IS FIRST TIME FOR CRACKS FOUND IN THIS AREA

SWRNGN	GARRTT		HYDRAULIC	CONTAMINATED	11/09/1999	14555
SA226AT	TPE33110			HYD SYSTEM	CA991210008	

(CAN) DURING HEAVY MAINTENANCE, NUMEROUS HYDRAULIC LINES WERE REMOVED AND REPLACED. GROUND TESTING OF HYD AND LANDING GEAR SYSTEMS WAS CARRIED OUT. DURING THE FIRST FLIGHT AFTER MAINTENANCE, THE NOSE GEAR UP INDICATION WOULD NOT FUNCTION. MAINTENANCE FOUND AIR IN THE HYDRAULIC SYSTEM AND AFTER SYSTEM BLEEDING THE LANDING GEAR SYSTEM FUNCTIONED NORMALLY.

SWRNGN	GARRTT	SWRNGN	WINDSHIELD	CRACKED	12/03/1999	21365
SA227AC	TPE3311U		2621126008	COCKPIT	CA991229036	

(CAN) DURING CRUISE FLIGHT, A LOUD BANG WAS HEARD AND THE COPILOTS WINDSHIELD INNER PANE SHATTERED

WTHRLY	PWA		SCREW	LOOSE	08/08/1999	849
620B	R985AN1		P13773	CARBURETOR	20000925SH022	

CARBURETOR FLOAT FULCRUM SCREW SAFETY WIRE VIBRATED THROUGH BACKING OUT FULCRUM SCREW FOR FLOAT. ENGINE QUIT RUNNING CAUSING FORCED LANDING. AIRCRAFT SUSTAINED SUBSTANTIAL DAMAGE. FULCRUM SHOWED CHATTER MARKS INDICATING FULCRUM SCREW WAS NOT PROPERLY SEATED. RECORDS DID NOT INDICATE ANY CARBURETOR WORK SINCE NEW. AIRCRAFT WAS NEW 2-17-97 AND HAD 849 TSN HOURS. SUBMITTER RECOMMENDED AN AD OR SA1B BE ISSUED TO INSPECT FLOAT SCREW FOR PROPER INSTALLATION.(X)

OMB No. 2120-0003

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MALFUNCTION OR DEFECT REPORT

OPER. Control No.	
ATA Code	
1. **A/C Reg. No.**	**N-**

Enter pertinent data	**MANUFACTURER**	**MODEL/SERIES**	**SERIAL NUMBER**
2. **AIRCRAFT**			
3. **POWERPLANT**			
4. **PROPELLER**			

5. SPECIFIC PART *(of component)* CAUSING TROUBLE

Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.

6. APPLIANCE/COMPONENT *(Assembly that includes part)*

Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number

Part TT	Part TSO	Part Condition	7. Date Sub.

8. Comments *(Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)*

Optional Information:

Check a box below, if this report is related to an aircraft

☐ Accident; Date _____ ☐ Incident; Date _____

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SUBMITTED BY:

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